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ABSTRACT

This module (part of a series of 24 modules) is on accommodating exceptional students in the regular classroom. The genesis of these materials is in the 10 "clusters of capabilities," outlined in the paper, "A Common Body of Practice for Teachers: The Challenge of Public Law 94-142 to Teacher Education." These clusters form the proposed core of professional knowledge needed by teachers in the future. The module is to be used by teacher educators to reexamine and enhance their current practice in preparing classroom teachers to work competently and comfortably with children who have a wide range of individual needs. The module includes objectives, scales for assessing the degree to which the identified knowledge and practices are prevalent in an existing teacher education program, and self-assessment test items. Topics discussed in this module include initial factors (such as classroom environment, cooperative learning, and peer integraion), assessment, adapting materials, scheduling, and monitoring academic activities. Bibliographic references and journal articles on classroom strategies for accommodating exceptional learners in the classroom are included. (JD)

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ED249204

CLASSROOM STRATEGIES FOR ACCOMMODATING EXCEPTIONAL LEARNERS

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SP 025 332

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Extending the Challenge:

Working Toward a Common Body of Practice for Teachers

Concerned educators have always wrestled with issues of excellence and professional development. It is argued, in the paper "A Common Body of Practice for Teachers: The Challenge of Public Law 94-142 to Teacher Education,"* that the Education for All Handicapped Children Act of 1975 provides the necessary impetus for a concerted reexamination of teacher education. Further, it is argued that this reexamination should enhance the process of establishing a body of knowledge common to the members of the teaching profession. The paper continues, then, by outlining clusters of capabilities that may be included in the common body of knowledge. These clusters of capabilities provide the basis for the following materials.

The materials are oriented toward assessment and development. First, the various components, rating scales, self-assessments, sets of objectives, and respective rationale and knowledge bases are designed to enable teacher educators to assess current practice relative to the knowledge, skills, and commitments outlined in the aforementioned paper. The assessment is conducted not necessarily to determine the worthiness of a program or practice, but rather to reexamine current practice in order to articulate essential common elements of teacher education. In effect then, the "challenge" paper and the ensuing materials incite further discussion regarding a common body of practice for teachers.

Second and closely aligned to assessment is the development perspective offered by these materials. The assessment process allows the user to view current practice on a developmental continuum. Therefore, desired or more appropriate practice is readily identifiable. On another, perhaps more important dimension, the "challenge" paper and these materials focus discussion on preservice teacher education. In making decisions regarding a common body of practice it is essential that specific knowledge, skill and commitment be acquired at the preservice level. It is essential that other additional specific knowledge, skill, and commitment be acquired as a teacher is inducted into the profession and matures with years of experience. Differentiating among these levels of professional development is paramount. These materials can be used in forums in which focused discussion will explicate better the necessary elements of preservice teacher education. This explication will then allow more productive discourse on the necessary capabilities of beginning teachers and the necessary capabilities of experienced teachers.

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*Published by the American Association of Colleges for Teacher Education, Washington, D. C., 1980 ($5.50).

In brief, this work is an effort to capitalize on the creative ferment of the teaching profession in striving toward excellence and professional development. The work is to be viewed as evolutionary and formative. Contributions from our colleagues are heartily welcomed.

This paper presents one module in a series of resource materials which are designed for use by teacher educators. The genesis of these materials is in the ten "clusters of capabilities," outlined in the paper, "A Common Body of Practice for Teachers: The Challenge of Public Law 94-142 to Teacher Education," which form the proposed core of professional knowledge needed by professional teachers who will practice in the world of tomorrow. The resource materials are to be used by teacher educators to reexamine and enhance their current practice in preparing classroom teachers to work competently and comfortably with children who have a wide range of individual needs. Each module provides further elaboration of a specified "cluster of capabilities" - in this case, strategies for accommodating exceptional students in regular classroom settings.

CLASSROOM STRATEGIES FOR ACCOMMODATING EXCEPTIONAL LEARNERS

Children without identifiable special needs may exist; classrooms filled with such children do not. Classroom teachers throughout the country must possess the skills for and be dedicated to teaching students with sensorial impairments, students who do not "fit" the curriculum due to retardation or giftedness, students who have learning or behavioral disabilities, and students who may not have a label but nevertheless exhibit a special need. The module addresses the following areas of concern in accommodating these exceptional learners:

1. initial factors such as room environment, coordinated planning and peer integration;
2. assessment by the classroom teacher for various purposes;
3. self pacing instructional options;
4. adaptation of materials;
5. scheduling of time, personnel, and instruction;
6. monitoring of activities by students and teachers, including grading alternatives.

Few regular classroom teachers have been trained as special educators. None, to our knowledge, has been trained in all areas of exceptionality. However, most regular educators will be challenged to teach students with a wide range of behaviors and abilities. It may well be that the single most important result of learning to accommodate the exceptional student will be that teachers will be better able to reach all students. Accommodation techniques for one educable mentally retarded student may facilitate learning for four or five slow learners. Activities for a gifted student may provide the spark for motivating the disinterested student of average ability. The science passage taped for a visually impaired student may be listened to by some of the poorer readers.

The materials in this module are designed to assist faculty members of colleges of education in equipping preservice teacher to accommodate the needs of all learners. Each section is constructed with the following format:

1. Rationale - why do researchers and experts in the field recommend knowledge of these topics for teachers in mainstreamed classrooms?

2. Body of Knowledge - what skills can preservice teachers develop to meet the extended needs of a mainstreamed classroom?

3. Resources - where can teacher educators and prospective teachers turn for more information? The resource sections will include one or more of the following categories:

   a. References and Recommended Readings - cited references; books and articles that develop concepts more fully, present more thorough research support.

   b. Practical Resources - resources for classroom teachers aimed at application of concepts.

   c. Media Resources - films and filmstrips that may be used in teacher preparation courses; some may also be used by teachers with their elementary or secondary students.

4. Learning Activities - instructional activities for use in college education courses; in-class and beyond class suggestions for expanding and applying knowledge.

The sections of the accommodation module have been structured as described in order to facilitate use as individual units. For example, college faculty may wish to include the section on informal assessment in a tests and measurement course, or the section on adaptation of materials in a language arts methods course. It would also be quite possible to use the Self Assessment section as a pretest, and individualize delivery of the content based on performance (e.g., student A studies entire module, student B studies section on self-pacing options, etc.).

Some topics in the present module have been more fully developed in other modules in this series. Of particular interest are the following:

Curriculum Based Assessment and Evaluation Procedures

Individualized Instruction: Writing Individualized Educational Programs

Promoting Constructive Student-Student Relationships Through Cooperative Learning

Curriculum Assessment and Modification

Peer and Cross-Age Tutoring

Psychological Education: Instructional Approaches for Teachers

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Objectives

Upon completion of this module you will be better able:

1. To identify and to discuss the impact of at least three factors which may influence successful classroom accommodation of exceptional learners.
2. To prepare, administer, and evaluate student performance on at least two informal assessment procedures.
3. To identify self-pacing options that accommodate exceptional learners in regular classrooms.
4. To identify reasons why regular classroom materials may need to be adapted.
5. To identify five levels of adaptation which teachers may use to alter regular classroom materials for exceptional learners.
6. To identify material adaptation techniques for specific problem situations or student behaviors in regular classrooms.
7. To identify procedures for alternative scheduling patterns for time, personnel, and instruction that increase accommodation of exceptional learners in regular classrooms.
8. To identify and discuss techniques for monitoring student performance that may be used by teachers and/or students.
9. To identify, compare, and contrast alternative grading options for exceptional students.

Reasonable Objectives for Teacher Education

All students should have well-structured knowledge, practical skill, and commitments to professional performance in the following areas relating to accommodating exceptional learners:

1. Integrating exceptional students into the regular classroom
2. Informally assessing student needs
3. Providing learning options
4. Adapting materials
5. Scheduling time, personnel, resources and instruction
6. Monitoring academic activities

Rating Scale for the Teacher Preparation Program

Check the statement that best describes the level of your present teacher-education program on the topic of accommodating exceptional learners.

_____1. Preservice teachers have been prepared to teach a "normal" heterogeneous range of students, and are aware that some grouping may be necessary. They have not been prepared for the possibility of teaching exceptional students in their classes.

_____2. Preservice teachers have been prepared to teach a "normal" heterogeneous range of students, and have received training on ability grouping and some informal assessment. If any exceptional students are placed in their class, they will tend to turn immediately to special service personnel to take over.

_____3. Preservice teachers have been prepared to expect mainstreamed classrooms. They are familiar with informal assessment techniques, some material adaptation techniques, and have knowledge of special service personnel available to them for more specific intervention.

_____4. Preservice teachers have been fully instructed on the integration of exceptional students in their regular classrooms. They are committed to meeting the needs of these students through informal assessment, material and instructional adaptations, and close interaction with support service personnel. However, they have little actual experience with special needs students.

_____5. Preservice teachers have been fully prepared to meet the needs of all students in a mainstreamed classroom. They are committed to and practiced in the use of informal assessment, material and instructional adaptation, and complementary team work with special service personnel. Field experience in mainstreamed classrooms has provided these teachers with the confidence to teach future students.

SELF ASSESSMENT

Knowledge and Comprehension
Match the following:

___ 1. cooperative planning

___ 2. IRI

___ 3. cloze procedure

___ 4. instructional reading level

___ 5. resource bank

___ 6. mini-contracts

___ 7. pass/fail grading

___ 8. Learning activity packets

___ 9. job sheets

a. includes a task to be completed in one class period, with a designated criterion and consequence

b. a process for joint problem-solving and coordination

c. a centrally located center for materials and teacher education texts

d. a method of determining placement in a graded series of reading texts

e. a teacher-written learning program containing all materials for study of a specific topic

f. focus on a particular objective, with sequenced activities for reaching objective

g. a method of assessing a student's comprehension of a textbook

h. based on minimum competency rather than level of accomplishment

i. student can read if provided assistance with new vocabulary, guide questions, and maybe motivation

j. organization of a talent/needs system within a classroom

k. student can read without additional teacher intervention

Short answer:

10. List three steps a teacher could take to enhance social integration in a mainstreamed classroom.
    a.
    b.
    c.

11. How could the concept of density affect classroom environment?

12. List two ways of assessing the "fit" between a student and his/her social studies text.

    a.
    b.

Define:

13. Cueing

14. Input mode

15. Advance organizer

16. Learning center

17. Cooperative monitoring

Application

18. Select one of the following situations (circle or name the situation you select) and describe two adaptations for the class assignment that could be made in each of the following areas.

    a. The assignment for a fourth-grade math class is to work 30 story problems (requiring multiplication with two-place multiplicands). The problems are to be copied from a text and worked on paper. The teacher has worked two problems on the chalkboard, but has erased his work. One example is presented on the textbook page.

    b. A tenth grade science teacher instructs students to read a 24-page chapter on the circulatory system. The entire chapter is to be read before the next class period and students are to be prepared to discuss the content.

    Length of task

    Motivation

    Complexity of task

    Concept load

    Reading level

19. You wish to obtain the following information about a student's performance. Identify at least two informal assessment techniques that a regular classroom teacher might use.

    a. You want to know whether an individual student can read independently a social studies text (readability = 7.6).

    b. You want to know what math skills a fifth grade student has mastered.

    c. You want to know in which reader a third grade student with reading difficulties should be placed.

    d. You want information about the educational history of a student experiencing difficulties in your class.

20. You are evaluating the environment of your classroom to determine whether it accounts for the special needs of the following students. Identify which questions should be asked for each student by writing the letter(s) of the question(s) on the blank by the student description.

    ________ a. Student has a mobility handicap and is in a wheelchair. Student does grade level work.

__________ b. Student has a learning disability. Student has above average general knowledge, is an excellent student in math, listens very well, has poor reading and writing skills.

__________ c. Student is severely visually impaired and needs a large magnifier or large print books. Achievement levels are near average, student is an excellent speaker.

__________ d. Student has emotional problems and fears close contact with other students. Student is accurate but works slowly and deliberately.

__________ e. Student has a hearing impairment, wears a hearing aid, and is a good lip reader. Achievement levels are near average. Student dislikes school. S/he is quite interested in horses.

A. Does the learning environment take into account that students work at varying rates?

B. Does the learning environment take into account that students use different methods to learn?

C. Does the learning environment take into account that students need more desk surface space when using special equipment?

D. Does the learning environment take into account that some students need wide aisle spaces?

E. Does the learning environment take into account that students with certain disabilities need freedom to select the best learning location?

F. Does the learning environment have space for listening?

G. Does the learning environment have space for viewing visual materials such as filmstrips, slides, videotapes, etc.?

H. Does the learning environment have space for solitude?

I. Does the learning environment have space for storage of special equipment?

J. Does the learning environment have materials which are at various levels?

K. Does the learning environment have materials which are relevant and motivating?

L. Does the learning environment provide private work space?

Assessment Key

b 1.
d 2.
g 3.
i 4.
e 5.
a 6.
h 7
j 8.
f 9.

10.-12. Multiple possibilities; cf. peer integration, room environment and assessment sections.

13. Cueing is a procedure where the teacher prompts the student to use a previously learned technique or strategy in relation to a specific task.

14. An input mode is the process a student uses in receiving information, including seeing, hearing and doing.

15. Advance organizers are teacher statements that preview essential vocabulary or content, relating new information to previous knowledge.

16. Learning centers are designated areas in the classroom that contain printed materials, media, and instructions for self-instruction.

17. Cooperative monitoring involves students and teachers in devising and administering an evaluation system.

Application Section

18. a.
    b.

19. a. cloze procedure
       Informal Reading Inventory (IRI)
    b. Informal Math Inventory
       Curriculum-Based Assessment (use of scope and sequence)
    c. IRI
       cloze
    d. interview
       review of records
       (observation)

20. a. D
    b. A,B,J, (F,G may also be counted as correct responses)
    c. A,B,C,F,I,J
    d. A,E,H,L
    e. B,E,G,J,K (D may also be counted as a correct response)

INITIAL FACTORS

Rationale

Before teachers can successfully accommodate exceptional students in "regular" classes, they must believe that such students should be in their classes (Birch, 1974). Objections to mainstreaming have included comments such as, "They can learn so much more in classes designed especially for them," and "Isn't that what the special educators are trained for?" As teachers become aware of the research support for mainstreaming, they are more likely to accommodate exceptional students with philosophical as well as emotional commitment.

Students with various exceptionalities have been successfully mainstreamed even in the era of increased special education classes, 1950-1970. Studies of hearing impaired (Connor, 1976), visually impaired (Campbell, 1955), physically impaired (Anderson, 1973), and educable mentally handicapped (Carter, 1975; Haring & Krug, 1974) students point to some common findings:

1. academic achievement for mainstreamed students is usually equal or higher than achievement of students in special education classes (Turnbull & Schulz, 1979).

2. social development is enhanced by placement in regular classes (Blankenship & Lilly, 1981).

3. "positive results are found only where there are close cooperative relationships between regular teachers and special educators" (Reynolds & Birch, 1977, p. 101).

In preparing to teach a classroom of students, some of whom are exceptional, the teacher must examine several areas before students arrive. Is the physical arrangement of the room, including special service staff, designed for a smooth and integrated program for exceptional students -- and the rest of the class? Finally, has a thoughtful approach to educating and sensitizing peers been established? These questions and some suggestions for answering them will be presented in the following sections.

Body of Knowledge

Classroom Environment

Even before the first pupil arrives, most teachers have an opportunity to survey the intended classrooms and make mental notes about maximizing their space. Decisions are made about desk arrangements, storage, and display areas. It is important for teachers to view prospective classrooms with an eye to the needs of exceptional students. The following categories may prove helpful in such an analysis:

1. Mobility

a. The doorway and desk arrangements should be accessible for a person in a wheelchair.

b. The visually impaired student should be introduced to the entire classroom and encouraged to make a "cognitive map" of permanent as well as movable fixtures (Reynolds & Birch, 1977). If possible, the room arrangement should remain constant.

2. Sound

Background noise should be kept to a minimum for hearing impaired students, and for highly distractable students. Effective sound control can be achieved by carpeting, study carrels, noise-blocking earphones, and separate study and activity areas.

3. Sight

a. Parially sighted students should be seated as close as possible to boards or screens intended for their viewing. They should be encouraged to move about the room when the focal point of a visual activity changes.

b. Students who are easily distracted, or who are confused by the usual visual bombardment of a colorful classroom, may work better in a plain, undecorated study carrel.

4. Seating

a. Desks should be appropriate in size and accessibility for physically handicapped students.

b. Seating for hearing impaired students (and their interpreters) should be close to the teacher, and at the center of group activities.

c. Seating should be flexible within a given day or class period. Many learners benefit from classroom freedom to move their desks for paired studying, small group instruction, or partial isolation.

Researchers have identified several components which are basic considerations in room design. Maslow and Mintz (1956) studied the effects of aesthetic room variables and reported the impact of beautiful and ugly decors. Beautiful rooms produced feelings of comfort, importance, energy and the desire to continue an activity whereas an ugly decor produced fatigue, discontent and monotony. Gallagher (1979) suggested that clocks, desk trays, study carrels and designated activity areas were essential elements in the structure of a classroom for emotionally disturbed youth. Teachers at all grade levels have noted the enhancing affect of circular, rather than straight-row, seating for discussions.

Hewett (1968) engineered a classroom design which included the grouping of desks and activity centers to maximize success. Behaviorally disordered students were scheduled into the areas designated by a hierarchy of tasks. Volkmor, Langstaff and Higgins (1974) described the organization of regular classrooms which featured the decentralized or open concept. This concept elicited students' participation in diverse activities located in individual and/or small group arrangements. A center of activities rather than a traditional row of desks was emphasized.

Savage and Mooney (1979) noted that many students with reading difficulties need a classroom environment that will "facilitate variety in reading instructional activities" (p. 295). They suggest reading skills center, a listening station, a uniter's corner, a media center, interest centers and a library corner.

Density is a variable which needs consideration when some special students are mainstreamed into a class. Density or crowding may have negative effects on students' academic performance, social interaction or mobility. The number of persons in the crowd may cause a reaction for some; for others it may not be the number in the crowd but the number of interactions necessitated by a crowd which is the significant factor.

Cooperative Planning

While some classroom teachers may feel that they are quite alone in the responsibility of planning instruction, others may wish they were. The teacher who has painstakingly scheduled and integrated a class routine is not always receptive to the news that children will be leaving this routine for remedial reading or math, speech therapy, LD resource help or any one of a number of student services. However, if teachers consider these services in their own planning, they can form a more educational, complete curriculum for each student.

Cooperative planning is a process through which teachers and special service personnel jointly problem solve and implement strategies to coordinate a student's regular and special education experiences, in order to achieve successful integration in both environments. Although not an easy process, cooperative planning is crucial if the exceptional learner's educational activities in the regular and special classrooms are to complement one another and to form a coordinated program.

Both regular and special education teachers bring a wealth of knowledge to cooperative planning situations. The regular classroom teacher, knowledgeable of the regular education curriculum in all areas and of his/her own classroom, is a valuable source of information about the exceptional learner's mastery of that curriculum as well as his/her academic, behavioral, and social performance within the regular classroom. The special education teacher, on the other hand, will contribute knowledge of specific handicapping conditions, their educational manifestations, and (if involved in individual formal and informal testing) knowledge of the exceptional student's performance on specific skills outside the classroom setting. Both teachers' skills in curriculum; knowledge of developmental skills of children and adolescents; instructional management; problem solving; regular, remedial, and exceptional education; and communication will be used to develop and implement a plan for coordination of the learner's regular and special education experiences.

The key to cooperative planning is communication, both in the initial planning and throughout the year. Special service personnel and classroom teachers have definite time constraints, making joint planning imperative. An Individualized Educational Program (IEP) conference is often a good time for specifying services and optimum delivery times. As the year progresses, students may become messengers between teachers. The following series of notes between Mr. Smith, 6th grade teacher, and Ms. Jones, the remedial reading teacher, was carried (and read) by David:

> Mr. Smith: David tells me you are doing an especially interesting unit on dinosaurs during his remedial reading session. Shall we change his time?
>
> Ms. Jones: Good suggestion; I feel David will really benefit from this unit. How about 8:30 - 9:00 on Mondays and Wednesdays or 1:20 - 1:50 on Tuesdays and Thursdays?
>
> Mr. Smith: The Tuesday - Thursday time works well for me. By the way, I have picked up several books about dinosaurs with a low readability level for David. Perhaps some of your other students would be interested, too.

Peer Integration

All but the terminally hard-hearted have been moved at some time by books and films of courageous young handicapped people who have entered the lives of the unaware, changing them forever into compassionate, empathic people. Such a transformation, if it happens, does not come about by accident. A teacher may play a role as important as the handicapped child plays in enabling this change of attitude. However, each situation demands different handling, and each teacher must have some plan to handle the integration of the exceptional child into a regular classroom.

When a teacher learns that s/he will have an exceptional student in class, s/he might consider the following steps in handling social integration.

1. Is the exceptionality one that needs to be explained to the rest of the class? Would such an explanation benefit the exceptional student? The other students?
2. If the teacher decides "yes," s/he should obtain information about the area of exceptionality.
3. The teacher should talk with the special service person who has worked most directly with the exceptional student in the past. The teacher may also develop sensitivity to the special student by reading evaluation results and other material describing the student's strengths and weaknesses. However, many teachers feel they would rather form their own opinions about specific capabilities.
4. The teacher should arrange a conference with the student to discuss how s/he feels about joining the classroom and what other students should be told. Depending on the age of the student and the

circumstances, parents or other teachers or counselors might be present.

5. Three options should be discussed with the student.
    a. The student can talk to the class and explain his/her handicapping condition. Often students will be more knowledgeable than any other source, especially about how much or how little help they expect from peers.
    b. The student can give the teacher the basic information to present to the class, and would be present herself/himself to answer questions.
    c. The student may choose to leave the classroom while the handicap is explained to the rest of the class.
6. The teacher should provide materials relevant to handicapping conditions. Many excellent books and short films are available for various grade levels, such as

Glazzard Meet Camille & Danielle: They're Special Persons (hearing impaired)

Encyclepedia Britannica (film) "Let Me Try" (mentally retarded)

Feeling Free Film Series "Ginny" (dwarf), "Hollis" (cerebral palsy), "Laurie" (visually impaired)

Glazzard Meet Scott: He's A Special Person (specific learning disability)

Encyclopedia Britannica (film) "Everyone Needs Some Help" (speech impaired)

(For additional resources, refer to the end of this section)

7. The teacher may want to guide the class through some simulation activities to heighten awareness about how handicapped students do

things and how other people react to them. Donaldson (1980) reported that for such simulations to be effective, they must be done realistically, and so the students participating can observe the reactions of nonhandicapped persons. If a student is going to get an idea of how it feels to operate from a wheelchair, for example, s/he should ride into an unfamiliar environment where others think the confinement to be real. Simulations of blindness, deafness, or a learning disability could add significantly to students' understanding of how the handicapped student compensates, adjusts, learns and feels. Resources that present simulations are listed at the end of this section.

Resources

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Media Resources: Attitudes of Students Toward Exceptional Individuals

1. Developing Understanding of Self and Others (DUSO) - unit on differences among individuals (not specifically designed to refer to exceptionalities, but can be adapted).

   American Guidance Service
   Circle Pines, Minnesota

2. ZOOM films - Ten films (approx. 6 minutes each) were developed regarding exceptional individuals (children) who are mainstreamed in the school and community. The films were developed for the children's television program ZOOM. The films emphasize likeness among children.

   Distributor: Encyclopedia Britannica Educational Corp.
   1822 Pickwick Ave.
   Glenview, Illinois 60025

3. What If You Couldn't . . . ? - a program for elementary schools about handicaps. "The purpose of the unit is to create an awareness and sensitivity among non-disabled children and teachers alike to the needs of handicapped children. The kit provides access to real information with hands-on interaction, support, values clarification, and answers to questions that can prevent common misconceptions. The activities develop the attitude that handicapped persons - including those that may be mainstreamed in class - are people first and handicapped second.

   Opening Unit - Some Ways the Same, Some Ways Different. Other units: Visual Impairments, Hearing Impairments, Mental Retardation, Learning Disabilities, Emotional Problems, Orthopedic Handicaps.

   Selective Educational Equipment, Inc.
   3 Bridge Street
   Newton, MA 02195

4. Please Know Me As I Am - A guide to helping children understand the child with special needs by Margaret E. Cleary.

   Jerry Cleary Company
   25 Ronald Road
   Sudbury, MA 01776

5. "A Walk in Another Pair of Shoes" - A filmstrip about a neurologically handicapped child narrated by Tennesse Ernie Ford.

   California Association for Neurologically Handicapped Children
   P. O. Box 604, Main Office
   Los Angeles, CA 90053

James Stanfield Film Associates
P. O. Box 1983
Santa Monica, Calif. 90406

11. What Do You Do When You See A Blind Person? This film takes a humorous look at sighted guide techniques, and how to enjoy a blind friend.

American Foundation for the Blind
15 West 16th Street
New York, New York 10011

12. A Different Approach - Nominated for an Academy Award, this film takes a humorous approach toward disabilities, encouraging viewers to question stereotypes of disabled people.

President's Committee on the Employment of the Handicapped
Film Coordinator, Office of Communications
1111 20th Street, N.W., Washington, D.C. 20036

(free, must request in advance)

Learning Activities

Task #1

As an individual or class assignment, have students design an optimal classroom environment. Have half the class work with unlimited funds, the other half with a minimal budget. They should think of themselves as educational architects, designing a classroom that could accommodate any student at their chosen grade level. The following questions might serve as guidelines:

Classroom Environment Assessment

Smith and Bentley, 1975

Does the learning environment take into account that students...

1. work with different materials?
2. work at varying rates?
3. work alone in different size groups?
4. use different methods to learn?
5. need more desk surface space when using special equipment, and/or texts such as tape recorders, Braille books, large print books?
6. who use wheelchairs, walkers, crutches or canes need wide aisle spaces?
7. with certain disabilities need freedom to select best learning location?

Does the learning environment have sub-spaces for...

1. listening?
2. discussion?
3. instruction?

4. researching?
5. reading?
6. viewing visual materials such as filmstrips or slides?
7. experimental activities?
8. solitude?
9. storage of students' special equipment such as typewriters, Braille writers, book magnifiers?

Does the environment have materials which are...

1. easily accessible to the student?
2. appropriately stored?
3. at various levels?
4. relevant and motivating?

Does the learning environment offer a variety of work surface heights to accommodate students who like to...

1. sit?
2. stand?
3. lounge?
4. lean?
5. perch?

Is the learning environment...

1. reflecting the students who work there?
2. interesting and attractive to the users?

Task #2

Have students form triads to role play one or more of the following situations. Let other class members (some people hate role playing) create role-play situations for peers.

Triad # 1

Band director: wants student in band full time

Drummer: has emotional problems; needs structure

Music therapist: feels drummer's emotional problems can be addressed through music therapy, suggests last half of band hour

Triad # 2

LD teacher: has taught student to skim history book for answers to questions as a study technique

10th grade student: disinterested in history except for wars

History teacher: wants all students to read text thoroughly; will not "allow" resource room time except for such reading

Triad # 3

4th grade student: performs adequately in all subjects but reading; dislikes reading intensely

4th grade teacher: wants student in basal reading group; suggests art, music or recess time for remedial work

Remedial teacher: feels that student has already failed in basal reading method; suggests reading time for remedial help

Task #3

Ask your students to contemplate any condition they might have or have had, such as epilepsy, a heart condition, visual or auditory impairment, or that a sibling, family member, or close friend might have had.

Ask any who are willing, at the next class session, to explain the condition to class members. What kind of environmental accommodations were (or should have been) made? How were classmates informed of the condition? If special services were received, how were they coordinated with other subjects?

Task #4

Have students research the pros and cons of mainstreaming. One format might be the assignment of six journal articles (research or conceptual), three of which support special class placement, three mainstreaming. An alternative assignment might be research papers exploring both views, but with the student drawing research based conclusions. Include all handicapping conditions and giftedness as topic options.

ASSESSMENT

Rationale

In designing or monitoring a child's IEP it is essential to include pertinent and accurate assessment information. This can be data received from a specialist's formal testing or data the teacher and/or parent has obtained from informal assessment and observation. The specialist has received many hours of training in administration and interpretation of test results. The teacher often has not received specialized training unless s/he has taken courses beyond the undergraduate level. It is vital to the IEP process that teachers be trained in informal assessment and observation techniques at the undergraduate level.

Reynolds and Birch (1977) indicate a problem with discriminatory formal assessment used in placement of students in specialized programs. The best solution to this problem may be to assess in the domain of instruction. Immense expense and social costs could be eliminated by teachers doing the majority of assessment in the classroom. They could immediately utilize the results of assessment in the daily instruction of the student. This would allow the teacher to ask specialists for more complex diagnostic and instructional assistance.

When the decision is made to provide services to an exceptional child, the process of goal setting and goal writing begins. The writing of an annual goal is most realistic when it is closely aligned with assessment results in determining the student's present level of functioning. In determining the scope of an annual goal and later the specifics of the short term or instructional goals the program designer must carefully consider numerous aspects of the total person. The teacher is often able to provide valuable information for realistic and obtainable goals.

Observable criteria for evaluation procedures used in assessing the mastery of long and short term goals varies among school districts. However, a constant in each district is the importance of the teacher in the monitoring as well as initial assessment procedures. There are several approaches used to evaluate goal mastery which include criterion referenced measurements, milestone evaluation, and to year end evaluation. For detailed information regarding these methods consult Burger, Ciani, Miller, Grigsby, Brown, Duffy, Yoh, Biacci, Wingate, and Duffy, (1977).

The information in the following section will include formal and informal assessment procedures that can be utilized by classroom teachers.

Body of Knowledge

Classroom teachers often know students better than other professional personnel. They have sustained contact with children and are in a unique situation to observe, screen and conduct informal assessments in a variety of environmental arrangements such as large and small group activities; in the presence of others of the same age and sex; and under work conditions which require different forms of participation. Information gathered by the classroom teacher can contribute to screening procedures and subsequent formal evaluations by staff certified in the medical, educational, psychological, and psychiatric disciplines. Furthermore, teachers can share the informal data in staffings where decisions for the placement of students with special needs are studied. Classroom assessments can also provide the teachers with valuable information for their day to day contacts with special students.

Classroom Assessment Options

Several assessment options are available for use by teachers who do not have extensive training in testing but who have daily access to the student, knowledge of his or her performance in classroom situations and a thorough understanding of specific curriculum demands. Assessment possibilities are more fully explored in a module in this series by Hofmeister & Preston (1982).

Observation. Observation is often used to confirm the results of standardized and informal assessments or to study skills not evaluated by formal tests. Observation is primarily concerned with watching and recording the students' behavior in the environment where it occurs with techniques such as time sampling rating scales (Wallace & Larsen, 1978). The module by Wood (1982) in this series describes different observational techniques for teachers.

Case history interview. Information may be obtained by interviews with parents or adults knowledgeable about the student, written completion of case history forms or interviews with the student (Wallace & Larsen, 1978).

Curriculum base assessment. (CBA) is a practice of obtaining direct and frequent measures of a student's performance on a series of sequence objectives from curriculum use in the classroom. The curriculum may be task analyzed before CBA is attempted. Sources for CBA are scope and sequence charts, teachers' manuals and curriculum guides (Blankenship & Lilly, 1981). The module by Hoffmeister and Preston in this series describes this form of assessment.

Criterion reference testing. The student is evaluated in terms of an absolute or specific criterion that has been established. This form of assessment is often combined with task analysis and is personalized for the exceptional student. It is more valuable as an ongoing assessment tool than as an initial procedure (Wallace & Larsen, 1978).

Determination of intensity of instruction. For mildly handicapped students the key factor may be the intensity of instruction over time rather than the amount of total instruction. Some students may respond better to a high intense instructional program for two months rather than two thirty minutes a day throughout the year (Meyen & Lehr, 1981).

Setting demands. One conceptualization of behavior is to view it as a function of the interaction between the learner and the environment (Lewin, 1935). If this view of behavior is adopted, then the demands of the environment or setting must also be addressed in the assessment process. One instrument which evaluates the setting is Assessment of Classroom Learning Environment by Maynard Reynolds. It is included as a reading in this module.

Informal Curriculum Assessment Options

Good teachers are involved in informal testing much of the time without even being aware of it. A first grade teacher notes confusion on letter names by on student. A sixth grade teacher observes that all the incorrect responses on a math worksheet involve the student's misunderstanding of the concept of a common denominator in division of fractions. The tenth grade literature teacher who asks a variety of probing questions observes a student who consistently fails on questions which involve inferential knowledge responses.

Three informal academic subject assessment procedures which can augment the observations are presented in this section. More detailed suggestions for the assessment of reading, mathematics and writing abilities are presented in the material by Moran (1978) included with this module.

Reading

Informal reading inventory. An informal reading inventory (IRI) is the method of ascertaining where a student will function best in a graded series of reading tests. To be the most accurate the IRI should always be administered on passages taken from the material assigned to the student. Published reading inventories are convenient and have many advantages but they cannot give as much information relevant to a student's placement in a particular series as an IRI can. The following steps are used in conducting an informal reading inventory:

1) A passage from the first third of a pupil's text and one from the last third are selected.
2) One book for the student to read and another for the teacher's markings are provided. Mimeographed copies of the passages are

ideal for the teacher because a permanent record of the student's oral reading performance can be retained.

3) The student is asked to read the passages, alternating oral and silent reading on every other passage *if* the student is expected to read in both modes. Often in the upper grades, oral reading of passages is not necessary.

4) The teacher should develop a recording system or use an established system (Ekwall, 1978) for recording oral reading miscues such as mispronunciations, insertions, repetitions, self corrections and unattempted words. Rate may also be recorded for both silent and oral reading. A tape recorder is a helpful recording device because it is difficult for the teacher to write all oral reading miscues the first time they are heard.

5) After each passage has been read, the teacher should ask a variety of questions about the passage. Again, it is important that these questions are similar to the kinds that will be asked throughout the year. If the teacher always emphasizes literal level recall, it is not important to measure inferential recall in the IRI.

6) Different scoring systems suggest various criteria for determining the student's instructional reading level, the level at which the student can read with enough facility to understand most of what is read, but still be challenged by new words and comprehension tasks. It is generally accepted that an instructional level involves a student performance on the reading passage which results in 95% or better word recognition and 75% or higher comprehension. Students may have different silent and oral instructional levels. The silent level is based solely on the comprehension score.

7) A more detailed diagnosis of the reader's abilities can be made by using a miscue analysis (Christie, 1979). The teacher can determine what kind of errors are made and decide which errors are most crucial to remediation.

8) The student is placed in a text indicated by the IRI to be at his or her instructional level.

Informal secondary textbook inventory. This procedure is an informal assessment of the "fit" between a student and the textbook to which s/he is assigned. It is not intended to be used with every student in the class but is a simple way of evaluating those students the teacher suspects of having difficulty with a given material. Although an initial test of the primary text used for instruction will give the teacher more direction in choosing supplementary texts, it would be best to perform this procedure on every material assigned to the students who have a great deal of academic difficulty. The procedure is as follows:

1. Two representative passages from the book are selected. There should be approximately 200 words in each passage. One passage will be read silently by the student and the other will be read to the student by the teacher.
2. Comprehension questions for each passage are constructed. Fifty to sixty percent of these questions should require literal recall of the material presented. The remaining forty to fifty percent can be divided among inferential and vocabulary questions as well as questions of evaluation and critical analyses when approprite to the subject matter. Six to eight questions for each passage are selected. Questions specific to the passage content rather than general knowledge ones are needed.

3. Student answers can be recorded on a tape recorded for later analysis. A tape recording may be a less threatening approach than written comments made by the teacher during the assessment session.
4. Silent reading rate is recorded. A stop watch with a second hand or a clock with a second hand is needed.
5. The sequence of testing is as follows: (a) student reads silently; (b) teacher asks comprehension questions and record responses; (c) teacher reads orally; (d) teacher asks comprehension questions and records responses.
6. Results of the testing are evaluated. The student's comprehension for both silent reading and listening should be at least 75% accurate. If the comprehension is between 75% and 90% the passage is said to be at the student's instructional level meaning the material can be used but should be accompanied by instruction such as help with new vocabulary, guide questions and possible teacher supplied movitation. If comprehension is above 90% the material is at the independent level and can be used by the student without additional teacher intervention.
7. To evaluate the student's silent reading rate look at Table I taken from How to Increase Reading Ability (Harris & Sipay, 1980).

Table 1

Medial Rates of Reading for Different Grades as Determined by Several Standardized Reading Tests

Median Rate	Grade								
by Test	2	3	4	5	6	7	8	9	12
Highest test	118	138	170	195	230	246	267	260	295
MEDIAN	86	116	155	177	206	215	237	252	251
Lowest test	35	75	120	145	171	176	188	199	216

Note. Silent reading rates, reported in words per minute

If the student is far below the norm for his or her grade placement that low rate could be contributing to other problems such as poor comprehension or failure to complete assignments. The teacher may wish to share this data with a reading specialist to obtain further evaluation or suggestions for remediation.

8. The results of the testing can be shared with the student and a plan of instruction made. The information relevant to the student's listening comprehension can be used in the instructional plan. Students whose listening comprehension is better than their silent reading comprehension may profit from a peer who will read the passage or from an audio tape of the passage.

The cloze procedure. This is a method of assessing a reader's comprehension of a textbook. Cloze tests can be constructed from basal, trade books or textbooks at any level and in any subject with connected discourse. The tests are fun for students to take if presented properly; however, they can be very frustrating if students are told they must figure out the exact word the original author used. The added advantage is that cloze passages are easy for the teacher to constract and grade. The students' answer provide a springboard for the instruction. The steps used in the cloze procedure as as follows:

1. A passage of approximately 250 words, not counting the first and last sentence, is selected.
2. The first and last sentences are left intact.
3. Starting with the second sentence every fifth word is replaced with a blank. Every seventh, tenth or more words are replaced for young readers. Fifty blanks will make calculating percent easier.

4. Students are instructed to write the word that best fits the blanks. Sufficient time should be allowed for completion of the procedure.
5. Answers that are sytactically and semantically equal to the original are scored as correct responses.
6. Scores are assigned to reading levels. Scores from 58% to 100% are assigned to the independent level, scores from 45% to 57% are assigned to the instructional level, and a score which is 44% or less indicates the frustration level.
7. Cloze is especially beneficial if followed by a class discussion of what particular words were substituted, and why or why they were not acceptable in context.

Mathematics

Informal testing. Evaluating performance in mathematics requires that the teacher attend to several critical aspects of the mathematical process. First, the student's ability to comprehend and to produce solutions to mathematical concepts should be evaluated using a concrete mode, a graphic mode, and a symbolic mode. Understanding of mathematical concepts in mode does not necessarily generalize to another mode without direct instruction. Second, the most traditional performance criterion, accuracy, will be determined in each of these modes. It is also very important to measure the student's rate as s/he completes math problems. When both accuracy and speed have been measured, the student's rate per minute can be determined and then can be compared to other students. Although accuracy alone will provide information about how well the student has acquired the skill, accuracy and speed data provide information about how fluent the student is with specific mathematical operations.

Informal assessment in mathematics involves two procedures: (a) error pattern analysis and (b) an informal mathematics inventory based on the scope and sequence of the mathematical curriculum.

Error pattern analysis. One process that can be used to assess students' current level of performance and to provide information regarding needed skill instruction is available to teachers on a daily basis -- analysis of students' written products. Use of error pattern analysis involves systematically reviewing each error made by a student to determine what specific erros have been made and whether these errors form patterns. For example, errors in multiplication problems can be made for one or more of the following reasons: (a) use of the wrong operation (e.g., adding rather than multiplying); (b) errors in multiplying (e.g., 6 x 5 = 36); (c) errors in adding partial products (e.g., 9 + 6 = 13); (d) errors related to regrouping (e.g., failure to regroup in correct column, placement of both numerals in partial product); (e) errors related to place value (e.g., incorrect alignment of partial products); and (f) writing errors (e.g., poorly formed numerals that cannot be interpreted. Analysis of a student's errors on a particular task might reveal that s/he made 6 errors on 12 problems with 5 errors related to multiplication facts and 1 error related to regrouping. Subsequent instruction might stress review of facts and then practice with multiplication problems similar to the task just completed.

Use of error pattern analysis is very time efficient because tasks assigned in the regular classroom serve as the basis for the process. Thus, time for instruction rather than assessment is maximized. Analysis of errors can often provide valuable information to direct assessment efforts thus saving time when tests (formal or informal) are necessary.

Informal mathematics inventory (IMI). Many educators have suggested using informal inventories in mathematics. Reisman (1972) has developed an IMI for kindergarten through grade six. Moran (1978) presented instructions for constructing and IMI from a mathematic text. She emphasizes assessing the student's abilities with word problems, open mathematical sentences, and basic operations. When constructing an IMI, the following procedures (in addition to those suggested by Moran) should be included:

1. Items from the text that correspond to concepts included on the scope and sequence chart for the student's level are selected. For example, depending on the student's level, the teacher may need to assess symbol-value correspondence, math symbols (recognition and function), place value, geometric concepts, and verbal problems as well as the basic operations of addition, subtraction, multiplication, and division.
2. Various presentation and response options should be used to determine the student's level of understanding of basic concepts (See Table 2). Presentation should begin at Level 16. Previous levels are used if the student fails to produce the desired response. Testing should reverse to previous levels until the student is successful. Instruction may then begin at the next level. For example, a student is asked to work on additional problems of single digit numbers (7 + 6 = ____). The teacher begins the presentation at Level 16. The student begins the presentation at Level 16. The student gives incorrect (or fails to give) responses at Level 16, 15, 14, 13, 12, 11, 10, 9, and8. S/he gives a correct response at Level 7. Instruction could then begin at Level 8 with

the teacher presenting pictures of two subsets, and the student writing (graphically symbolizing) the sum. As the student is successful at one level, instruction progresses to the next level.

Table 2

Sequence of Instruction for Addition of Single Digit Numbers

	Instructor	Learner
Concrete	1. Constructs subsets representing addends	Constructs set representing sum (concrete)
	2. Constructs subsets representing addends	Identifies picture of set representing sum (graphic)
	3. Constructs subsets representing addends	States sum (verbal)
	4. Constructs subsets representing addends	Graphically symbolizes sum (symbolic)
Graphic	5. Presents pictures of two subsets representing addends	Constructs set representing sum (concrete)
	6. Presents pictures of two subsets representing addends	Identifies picture of set representing sum (graphic)
	7. Presents pictures of two subsets representing addends	States sum (verbal)
	8. Presents pictures of two subsets	Graphically symbolizes sum (symbolic)
Verbal	9. States two addends	Constructs set representing sum (concrete)
	10. States two addends	Identifies picture of set representing sum (graphic)
	11. States two addends	States sum (verbal)
	12. States two addends	Graphically symbolizes sum (symbolic)
Symbolic	13. Graphically symbolizes two addends	Constructs set representing sum (concrete)
	14. Graphically symbolizes two addends	Identifies picture of set representing sum (graphic)
	15. Graphically symbolizes two addends	States sum (verbal)
	16. Graphically symbolizes two addends	Graphically symbolizes sum (symbolic)

(Adapted from: Cawley, J. Project Math)

Resources

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Learning Activities

Task #1

Divide the class into two sections. Have students select partners. One section should administer the evaluation for secondary textbooks. The other section should follow the cloze procedure. Students may use the text for your course, another textbook, a novel; it might be interesting if a variety of books is used. Individual students should not be put on the spot by reporting reading ability. Instead, have the two sections discuss what they learned from administering and taking the tests, and how applicable such a technique would be in their intended teaching area.

Task #2

Have students respond to these statements:

"I don't like taking time that I should use teaching to test kids."

"Tests make people uptight; I want a relaxed atmosphere in my classroom."

"Doesn't the district hire someone for testing?"

"Maybe these are good suggestions for the elementary teacher with 20 kids; I have 120 sophomore and junior English students."

"There is no way I can leave my 29 kindergarten children to test the 30th individually."

"You talk about assessing the 'whole' person. Haven't you heard--it's back to the basics, which means only academics."

Task #3

Have students develop areas of analysis for addition, subtraction and division similar to the areas presented in the module for multiplication.

R

ASSESSMENT
OF
CLASSROOM
LEARNING
ENVIRONMENT

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This rating scale may be reproduced - with acknowledgement of source.

Instructions for the Use of the ACLE Scale in Needs Assessment

The ACLE (Assessment of Classroom Learning Environment) Scale is a simple rating instrument designed to assist public school personnel in the transition to mainstreaming. The 16 subscales making up the ACLE Scale focus on different elements of classroom environment and practice which, taken together, provide an overview or profile of a mainstreamed regular class.

The Scale has several purposes: (a) to serve as a needs assessment upon which to base the planning of training for regular classroom teachers; (b) to provide guidelines for assesing a school's compliance with the principles of individualized education; (c) to encourage the professional development of teachers in selected areas of practice;and (d) to outline the characteristics of a "mainstreamed" school. THE ACLE IS NOT DESIGNED TO BE, NOR SHOULD IT EVER BE USED AS, AN INSTRUMENT TO EVALUATE TEACHER PERFORMANCE.

Each subscale contains 5 descriptors (numbered 1-5), which are sequentially ordered according to increasing desirability. At the 5 level, the subscales add up to a description of a classroom with a very high degree of power to accommodate exceptionality.

To facilitate the recording of teachers' observations of their classrooms, there is included a summary Needs/Assessment chart. The form may be used for individual classroom observations or adapted to describe the characteristics of several classrooms.

Acknowledgements

The orginal idea for this scale came from Barry Dollar and Susan Dollar who used a similar technique as part of their LOFT (Learning Opportunities for Teachers) System.

Robert Prouty suggested the use of a scaled instrument in teacher education and contributed ideas for several scales.

A more detailed discussion of the Assessment of Classroom Learning Environment (ACLE) Scale is provided in M.C. Reynolds & J. Birch, Teaching Exceptional Children in All America's Schools (Reston, VA: The Council for Exceptional Children), 1978.

48

Assessment of Classroom Learning Environment

Summary

Beneath the first subscale title shade in the square at the level you have checked as representative of your classroom. Then shade all squares below it. Continue with all subscales in the same manner, creating a bar graph profile of your classroom environment.

	Space and Facility Accommodation	Teaching-Learning Setting	Social Environment	Control/Responsibility for Environment	Classroom Management	Teaming Arrangements	Instructional Methods	Curriculum Flexibility	Materials	Degree of Structure	Rate of Learning and Behaving	Evaluation	Affective Education	Recognizing Cultural Differences	Child Study Process	Parent Teacher Interaction
LEVEL 5																
LEVEL 4																
LEVEL 3																
LEVEL 2																
LEVEL 1																

Space & Facility Accommodations to Physical Impairments

___ 1. The classroom (a) is essentially untreated for sound; (b) access creates difficult elevation and entry problems for students in wheelchairs; (c) has no amplification devices; (d) has no partitioned areas for small-group work; (e) movement to washrooms, lunch rooms, and other essential areas is difficult for orthopedically or visually impaired students; (f) space is very limited--thus inflexible; and (g) storage space is almost totally lacking.

___ 2. At least four of the seven limitations (a through g) are characteristic of the classroom spaces.

___ 3. General architectural accommodations (elevation changes) have been managed, but internal spaces are essentially untreated and inflexible.

✓___ 4. Basic architectural accommodations are adequate. Classroom and other spaces are generally adequate in size and sound treatment is adequate; but storage, furniture, and flexibility of space are significant problems.

___ 5. The classroom is carpeted and/or otherwise treated effectively for sound control; access and entry present no problems for any student; storage, flexible partitioning possibilities, sound amplification, varied furniture, and like matters are provided adequately.

Teaching-Learning Settings

____ 1. Desks of uniform design are placed in neat rows and columns, all facing the teacher's desk.

____ 2. Desks of uniform design are placed in neat rows and columns, all facing in the same direction; at least one "special interest center" is included.

____ 3. Students desks or tables are not placed in rows-by-columns but are arranged according to variously spaced interest centers.

____ 4. Instructional space is complex and is organized to include various learning centers and to permit students to locate themselves conveniently.

____ 5. Instructional space is divided into the various areas or learning centers that include room for both materials and students. Areas outside the classroom within the school and community facilities are used with significant frequency for organized activities.

Social Environment

____ 1. Students are expected to work essentially alone on instructional tasks. Student-student relationships tend to be nonsharing, even competitive. The teacher rewards individual performance and seems unsystematic in use of group processes.

____ 2. Students work mainly in isolation, occasionally in small groups. The teacher praises and supports friendly interactions but no systematic provision is made for education in group processes. Evaluation tends to be individually oriented and to encourage competition.

____ 3. Students work in small groups frequently and must share materials. All records are individual. Students are expected to learn to work with each other but goals for group work are nonspecific.

____ 4. Students are clustered so that they can interact freely. Some group projects are assigned with considerable frequency. Group projects are evaluated informally, but grade records emphasize individual achievements. Social skills are valued.

____ 5. The development of positive social skills and attitudes is one avowed objective of the teacher. Students are expected to interact and share with each other and to help one another. Sometimes they work on group projects, dividing up work. The teacher teaches the skills of group processes and rewards effective group work through grading and other means. Students have every reason to be mutually helpful. Definite efforts are made to provide socially integrative experiences for exceptional students.

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Control of and Responsibility for Environment

____ 1. Each individual class and the school is a rule-governed operation; rules are based almost totally on the teacher's authority.

____ 2. Students share occasionally in discussions of how the school environment shall be managed. A degree of "consent of the governed" is achieved.

____ 3. Formal arrangements are made for the regular involvement of students in governance -- as in student government, student management of classroom materials, weekly class meetings, and the like.

____ 4. Individual and groups of students are given special training and responsibility for the management of much of the school environment and processes. Included are technical matters such as running audio-visual machines, administering competency exams, orienting new students, showing the school to visitors. In addition, training may be included in counseling skills (listening, reinforcing, etc.) and other aspects of interpersonal and group behavior.

____ 5. Students share significantly in the governance (policy making and administration) of their classes and school. Their obligations run to other students as well as to school officials; they are expected to help to make the learning environment productive. They receive instruction when necessary to help them to carry responsibilities. The teacher is the primary leader in the class but gives particular attention to encouraging constructive initiatives and autonomy by students.

Classroom Management

____ 1. Classroom management tends to be at least mildly chaotic and noisy. Only a minority of students tend to be thoroughly attentive or on task most times.

____ 2. Group signals and alerts are generally well attended, and at least half the students are on task at most times; but transition periods tend to be chaotic. Behavior disturbances are handled unpredictably. Materials management and record keeping are at minimum acceptability levels.

____ 3. Teacher-pupil and pupil-pupil communications and general management are adequate, but mainly on the basis of the high authority level of the teacher. Predictability of class behavior is high because negative consequences for misbehavior are high--a tough but not highly competent situation.

____ 4. Communication is good; organization is complex but orderly; student attention level is high; disturbance rate is low. Teacher is creative and adaptive, she shares responsibilities for the environment with students, and she rationalizes rules in group sessions. Some days are very bad but most are tolerable to good.

____ 5. At least 90% of students attend when teacher tries to alert the whole class; questions almost always serve as signals for all students; systems for transitions, record keeping, materials management, and like matters are well understood and observed efficiently. Students are clear about expectations and consequences of their behavior.

Teaming Arrangements

_____1. When "problem" students are identified in regular classrooms, they are referred for study by specialists (e.g. school psychologists, school social workers, school nurses) on the assumption that the problem ownership has been transferred outside of the regular classroom.

_____2. When "problem" students are identified in the regular classrooms they are referred for study by specialists. The classroom teachers are called upon by the specialists to assist in the diagnoses. Observations of the student may be made in the referring teacher's classroom.

_____3. When "problem" students are identified in regular classrooms a referral is made to specialists. The regular teacher often participates with the parents and school specialists in writing an "Individualized Educational Program" (IEP). The diagnosis is almost exclusively child centered.

_____4. When "problem" students are identified in regular classrooms referral is made for study by specialists. The regular teacher participates in the diagnosis and in writing the IEP. Classroom observations are made of the student and the regular classroom learning environment. Consultation with the classroom teacher to achieve program modifications is a part of the total process following referral.

_____5. Systematic preventative studies are made in the school for the "problems" of students. These become the bases for studies of classroom and home situations as well as of students and the bases for broad efforts for improvement (e.g., providing additional approaches in reading instruction, increasing teacher competency in using small-group cooperative instructional groups, and increasing home-school interaction on truancy issues). When troublesome issues occur and "problem" students are identified, specialists are called upon for consultation with the teacher and initial attention is given to possible program modifications to accommodate students needs in the regular classroom.

Instructional Methods*

*(a) Direct instruction--lecture with or without correlated visual aides and/or demonstrations; (b) inquiry discovery methods--students inquire into subject matter and reach generalizations independently; may or may not involve interactions among students; (c) group investigations--democratic process; (d) precision teaching--application of methods of applied behavior analysis; (e) instructional games--embedding concepts to be taught in game situations; (f) creativity--methods emphasizing divergent problem solution and other forms or productive rather than reproductive thinking; (g) psychoeducational diagnostic--prescriptive procedures; (h) peer or cross-age tutoring; (i) developmental teaching, as an indirect psychological education for moral development.

_____1. In a typical month, teacher uses systematically no more than 2 of the above methods.

_____2. In a typical month, teacher uses systematically 3 or 4 of the above methods.

_____3. In a typical month, teacher uses systematically at least 5 of the above methods.

_____4. In a typical month, teacher uses systematically at least 5 of the above methods and is studying or consulting with other school staff members about additional approaches for some students.

_____5. Teachers are able to use a wide variety of the teaching methods and have collaborative arrangements with special education teachers, school consultants, psychologists, or others to help to implement additional methods as they are needed. Such as direct instruction, inquiring or discovery methods, precision teaching (behavioral) methods, group methods, institutional games, peer-tutoring, etc.

Curriculum Flexibility

_____1. Curriculum content is defined primarily by the textbook or teachers' guide, including the sequence of topics or activities. The content and sequence are uniform for all students.

_____2. The teacher basically follows a textbook or teachers' guide in setting content and sequence of topics but introduces significant modifications or "special" topics to accommodate to group's general interests and the teacher's judgement of priorities. The program is almost totally uniform for all students.

_____3. The teacher basically follows a textbook or curriculum guide but uses more than one level or set of textbooks in heterogeneous classes.

_____4. Content for particular students is specified by the teacher; several levels of textbooks are used along with varieties of other instructional materials. Students are assessed individually and given tasks and materials of appropriate levels.

_____5. Student interests guide selection of a significant portion of the content. The materials and content for each student are chosen according to individualized evaluation of previous performance, achievement, and interests. Instructional materials include several levels of reading materials, collections of audio-visual aids, instructional games and competency examinations, etc.

Materials

____ 1. The instructional materials include essentially only one textbook of standard grade-level difficulty which is used almost uniformly by all students.

____ 2. Instructional materials include several levels (different reading levels) of basic textbooks covering instructional content. Additional materials from the library are on hand regularly for use by students.

____ 3. All of item 2 plus teacher's occasional use of films, filmstrips, audio tapes, overhead projections, and similar audio-visual aids.

____ 4. All of items 2 and 3 plus permanent provision of a variety of materials in established interest centers for use in teaching-learning process.

____ 5. Instructional materials include several levels of reading materials, collections of audio-visual materials, instructional games, and competency examinations. Students are able to "store" in the classroom their individual sets of materials and records. Students are competent in use of all equipment. Special instructional materials centers and consultants are available to assist teachers.

Degree of Structure*

_____1. Structure is attended to only casually in organizing instruction. No systematic effort is made to control the degree of structure.

_____2. Structure is imposed on some topics -- those considered most essential; all students tend to receive similar treatment.

_____3. All students receive a carefully structured qpproach as new concepts or content are introduced. Students who complete work rapidly are free to proceed in their own way in their "extra" time.

_____4. Instruction is varied in degree of structure, so that all students have a variety of experiences. Degree of structure tends to be a function of teacher interest and not fully a function of individual student needs, but all student experience variety.

_____5. Degree of structure* is varied systematically so that students who need high structure get it and those who achieve better by creating their own structure are encouraged to do so. The teacher has structure clearly worked out for his/her teaching area and used it creatively.

*Instruction shows high structure when the teacher controls the instruction in great detail; new concepts and discriminations are introduced and related in smooth, gradual, carefully-sequenced order. Instruction shows low structure when students are "on their own" to a high degree; the students discover or create structure with but little detailed control by the teacher.

Rate of Learning and Behaving

____ 1. All students are given fixed, uniform assignments to complete in uniform periods of time.

____ 2. All students are given uniform minimum assignments for standard periods of time. Students who complete work rapidly are usually free to work on unrelated activities. Students who do not complete work "on time" continue with classmates in the next assignments despite poor background. Some extra help to "laggards" may be given.

____ 3. All students are given uniform minimum assignments for standard periods of time. Students who complete tasks rapidly and well are allowed informally to proceed to more advanced related topics. Students who fail to complete tasks satisfactorily are given extra tasks and/or assigned to aides, resource teachers, or others for individual help.

____ 4. Students are given mastery examinations at set times, such as the beginning of each semester. After each evaluation, subgroups proceed at different rates and at different levels of the curriculum.

____ 5. Students proceed with instruction at rates indicated by mastery examinations. Such exams may be given at any appropriate time. Entry to new areas may proceed at any time according to the individual's demonstrated readiness.

Evaluation

____ 1. Evaluation is almost totally test oriented and always involves comparisons with other class members. Results are recorded as percentiles, percentages, standard scores, or comparative grades, usually with no breakdown for diagnostic purposes. Scores are not interpreted in "mastery" terms. Atmosphere stresses grades and competition.

____ 2. Evaluation is test and norm oriented, but with careful attention to domains (or what is being taught). Some modest degree of use is made of results in assigning "make-up" work or in other limited adjustments of the program.

____ 3. Evaluation is reasonably in accord with what is being taught. All exams are returned to pupils but attention is mainly on grading, rather than on the planning of instruction. Procedures tend to be soemwhat inconsistent.

____ 4. Most assessments are mastery oriented and specific to domains, and they are used effectively and regularly in planning instruction. Feedback to students on all tests is complete and clear. However, term grades tend to be assigned quite strictly on a norm or social comparison basis. Students are encouraged to evaluate their own work independently.

____ 5. Assessments are partly test oriented but they include informal observations and assessments as well. All evaluation is specific to domains and mastery oriented. Assessments are quite frequent and integral parts of instruction. Occasional norm-oriented tests are used to give students a basis for comparing their rates of development with those of others. All students have a solid chance to sense progress. The teacher is aware that not all learning can be assessed by another person and that a pupil must evaluate his/her own growth and optimal conditions for growth as part of the total evaluation program.

Affective Education*

____1. Concern for affective development is limited to a general policy of courtesy and pleasantness. Affective education is in no way a planned part of the curriculum.

____2. Positive affective development and climate, although recognized as worthwhile, are sought only on an impulse or "time-available" basis.

[✓ ____3.] Affective education is recognized as worthwhile and is included on a planned but infrequent basis throughout the year. Teachers have opportunities for inservice education and consultation on the topic.

____4. Affective education is recognized as worthwhile and is included on a regularly scheduled basis much like other subject areas are in the weekly instructional schedule. Needs of teachers and administrators are recognized as well as those of students.

____5. Affective education* is recognized as an essential component of the total curriculum, is a part of the regular daily instructional schedule, and is systematically included in carry-over activities in all subject areas. Administrators and teachers attend equally to professional collegues' affective needs. Expert consultation is provided on affective education to both teachers and administrators.

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*Affective education, as used here, refers to curriculum designed to facilitate the development of a positive view of self, of learning activities and of life in school.

Recognizing and Appreciating Cultural Differences

____ 1. Instruction proceeds with little or no explicit recognition of cultural differences. Majority values and styles dominate the classroom.

____ 2. Special arrangements for remedial work are made for students who may have second language problems or who have different developmental patterns and learning styles associated with race or ethnicity. Teachers may have had required human relations training.

____ 3. Special projects oriented to needs of minority students are arranged to supplement the regular school program: such as special pre-school language classes, bilingual youth advocates, or special units in Native-American education or Black studies.

____ 4. Efforts are made to go beyond special projects and to redesign the basic curriculum to include valid elements from all relevant cultures so that all children can feel that both their past and future are given studied and valued consideration.

____ 5. Content, materials, and methods of instruction are made meaningful for poor and minority group children as well as all others; the commitment to cultural pluralism is real, especially as it is reflected in curriculum. Both students and parents from minority communities feel engaged and well understood in the school situation; they feel like equals among equals. Aesthetic school experiences include samples from all cultures represented by the student body.

Child Study Process

____ 1. There is no structured child study process. Children who do not conform to expected behavior or achievement norms are dealt with through referral and segregation in isolated special education programs or other forms of separate tracks or groupings.

____ 2. Child study is seen as a problem-centered effort to identify and categorize children's deficits using standardized psycho-medical tests and to determine appropriate placements external to the regular classroom. Specialists, such as psychologists, are mainly occupied in classifying and labeling students for special programs.

____ 3. Child study is psycho-educational in nature, relying heavily upon standardized assessment instruments to diagnose and classify the child's deficits, with focus on determination of appropriate remedial programs.

____ 4. Child study is educationally-oriented, with child and his/her teacher central to process and focus on analyzing teaching-learning interaction to determine areas where efforts for improvement should be concentrated.

____ 5. Child study is focused on positive development of increasingly accommodative learning environments. Children's diversity in needs and abilities are closely examined, not to identify deficits in children but rather to plan modification in school practices and in school/home environments. Specialists, such as psychologists, are heavily involved in program development as well as in child study.

Parent-Teacher Interaction

_____1. Parent-teacher interaction is characteristically limited to crisis-stimulated meetings, often adversary in nature. Administrators enter mainly as rule enforcers.

_____2. Parent-teacher interaction, in addition to crisis-stimulated meetings, occurs on a regularly scheduled basis throughout the year; the agenda is characteristically limited to the teacher's reporting on children's progress.

_____3. Parent-teacher interaction, in addition to crisis meetings and formal reports, include periodic teacher-initiated affirmative meetings with all parents to informally communicate children's positive behaviors and achievements.

_____4. Parent-teacher interaction is characterized by an open and trusting climate of communication within which problems and crisis are seen as the cause for common concern and investment in solutions, and both parents and teacher participate in formal and informal information sharing.

_____5. Parent-teacher cooperation is close and continuous. As volunteer aides, as participants in various school committees, as co-sponsors of school-community activities, parents join with teachers in enhancing and expanding children's learning and experiential opportunities. The atmosphere stresses creativity, mutual commitments, and trust. Administrators enter as leaders/facilitators. When several problems occur, parents, teachers and other school officials are able to work together cooperatively in service to the child and not as adversaries.

# #

ADAPTING MATERIALS

Rationale

Although commercial publishers often spend large sums of money determining what specific aspects of educational materials appeal most to teachers and to students, teachers who use the materials developed following such studies frequently can describe ways in which those materials are unsuitale for specific learners. In a national survey related to materials and media of over 30,000 special educators, Vale (1980) found that 82% of the teachers indicated a need for time, resources, and training for developing materials for exceptional children. Fifty-eight percent of the teachers surveyed made at least 25% of their materials. Although teachers indicated that developing and adapting media and materials was a skill critical to their job ranking in the top 6 of 47 skills; less than half of the teachers had any training in materials development or design at the preservice level.

The Vale study surveyed only special education teachers; regular education teachers were not included. However, if special education teachers indicate a strong need to adapt existing materials and to design other materials for their students, it is reasonable to assume that regular education teachers also need to adapt and to design materials for problem learners. Although the Vale study does not present data about types of adaptations that teachers might make, from the data one can see that teachers do find fault with existing materials and are expressing need for materials in other formats and in specific areas in which adequate materials are missing. If teachers currently in schools are expressing needs in the areas of methods and materials, preservice teachers undoubtedly will experience similar needs as they begin teaching. Therefore, it is important that these teachers know how to adapt the materials they do have available. This section provides suggestions and techniques for adapting instructional materials for learners experiencing difficulty in the classroom.

A common strategy advocated for accommodating exceptional learners in regular classrooms is that of adapting or modifying materials used in that environment for the unique needs of exceptional learners. Some exceptional learners can learn the same concepts from the same curriculum materials as nonhandicapped learners if minor adaptations are made. However many times, for any number of reasons, the materials used in the regular classroom are not totally appropriate for exceptional learners because of variations in ability and, thus, more extensive modifications are needed. A teacher who is aware of students' strengths and weaknesses will recognize the points where instructional materials fail to match learner needs. This section provides ideas for adaptions ranging from simple to more complex.

Several considerations are important when one is faced with mismatches between instructional materials and learner needs (Wilson, 1976). First, the expense of the adaptations or modifications in terms of teacher time must be considered. Many adaptations are quite complex and require inordinate amounts of time for the length of time the material will be used or for the importance of the skill to be taught. In many instances, simpler and less time consuming adaptations will suffice. Second, the expertise of the teacher attempting the adaptation must be considered. Some types of adaptations require more complex and sophisticated curriculum development skills than others. Third, the availability of the needed materials must be considered. Teachers often invest time and energy adapting materials because they do not know that the material they need is available. Often the materials are available commercially, or may be available from another teacher. Before one attempts a complex adaptation, all possibilities of locating the materials should have been exhausted.

Teacher trainees should be taught to ask the following questions when considering adapting a material:

1. What aspect of the task is causing problems for the student?
2. What must I do to adapt the task for this student?
3. Can I locate a material that presents the task the way this student needs it to be presented?
4. If I can't find the material I need, is the adaptation worth the time I'll spend doing it?
    a. Is the skill an important one?
    b. How long will the adapted material be used?
    c. Is there a possibility that the material might be used by other students?
5. Do I have the skills I need to make this adaptation?
6. What is the simplest adaptation I can make to meet this student's needs?

By responding to these questions, teacher trainees will evaluate their own skills and the time investment required to make needed adaptations.

In the remainder of this section, five types of material adaptations will be described, ranging from simple to complex. Teacher trainees should be advised to implement simple adaptations first, observe the results, and proceed to a more complex level only if simpler adaptations are not effective. In the last section, specific techniques for adapting materials are described in relation to four reasons why adaptations often are necessary: motivational reasons, length of task, complexity of task, and concept load.

Body of Knowledge

Types of Adaptations

Five levels of adaptations will be briefly described. These levels are arranged hierarchically from simpler to more complex, based on the amount of time and the skills required to produce the adaptations.

Change in format. The least complex adaptation is a change in the format of the material without a change in the task itself. Such a change would involve manipulating some aspect of the physical arrangement of the material or lesson while maintaining the method of presentation and the method of response to the task. This type of adaptation may be necessary under the following conditions:

1. An assignment is lengthy and a student cannot maintain attention to complete the assignment at one time.
2. Task explanations or examples are inadequate and more explanation of the task is needed beyond verbal or written directions already given.
3. Directions for tasks are inadequate or are too complex, and additional or simplified directions are needed.
4. Stimulus items are too crowded on a page, and the student is unable to focus on individual stimulus items.

Adaptations for any of these conditions can be accomplished with simple modifications in format that maintain the nature of the original task. To counter a lengthy assignment, the size of the assignment to be completed at one time may be reduced with the student being asked to complete the entire assignment in smaller units. The rationale for this adaptation is to provide success experiences for the student. S/he can experience the satisfaction of completing short assignments and tasks cumulatively equal to one lengthy assignment that might never be completed. The student with a short attention span is allowed to break his/her concentration legitimately as one short assignment is completed, submitted to the teacher, and another begun.

Techniques that may be used include either dividing an assignment into several smaller assignments for a student, or teaching a student to divide the assignment himself/herself (see Table 3, p. 78). The latter technique is especially appropriate for upper elementary and secondary students who are expected to take greater responsibility for their own learning. These students should be taught how to "chunk" material rather than simply expected to do so.

If greater explanation of a task is needed, the teacher may model the task for the student. Exact modeling of a task may be necessary for students to observe the steps (in sequence) that s/he must follow in order to complete the task. If the steps are modeled, they are not left to chance but are explained clearly, thoroughly, and sequentially. The following techniques are examples of those that might be used in modeling a task. One technique is to model a task from beginning to end "thinking aloud" so the student can observe the thought processes that must take place. A second technique (applicable when visual models or examples are appropriate) is to provide models of the task that allow only one interpretation. For example, the teacher should evaluate the visual examples in workbooks and on worksheets to determine if they are accurate representations of the task. Frequently, models or examples are presented that do not require the student to make all the discriminations that s/he must make on the task itself. The following example presents a model that is different than the task itself:

Instructions: Circle an antonym of the underlined word.

Example:	cloudy			sunny
	warm	hot	cool	windy
	hard	rough	solid	soft

A more appropriate example for this task would be one that is exactly like the task, i.e., one that includes three response choices rather than one response item -- the correct one.

Often task directions presented to students are lengthy and complex, and must be simplified. Directions that are presented clearly and simply are more apt to be interpreted correctly. Extraneous comments and lengthy directions may be ignored or may be forgotten more easily than a single, concise statement. Thus, the technique to remedy this situation would be to state the directions clearly in a single statement. In other instances, directions may be given too cryptically and may need some expansion. Expansion of such directions should clarify, rather than confuse, the task.

Some materials will present so many stimulus items on a single page that a student will have difficulty focusing on a single item. The teacher may (or the student may be taught to) separate, chunk, or mask items, thus allowing the student to respond to the item as it was originally designed. These techniques reduce the amount of incoming stimuli and allow the student to focus his/her attention.

The modifications described here are designed to change either the physical format or the directions while maintaining the task requirements. Little teacher time and few complex skills are required to complete these modifications.

Change input/output modes. If students are unable to receive information or express known information through the mode being used in the classroom, the input and/or output modes may need to be changed. School environments place great demands on the reading, listening, and writing skills of students. Many mildly handicapped students, although cognitively able to comprehend the concepts being presented, may be unable to acquire the information through the presentation mode used by the teacher. The teacher should not assume, however, that simply switching from one mode to another will result in the acquisition of information. For example, if a student has reading difficulties, the teacher may have him/her listen to a taped version of the same material. However, if the student has not been taught how to listen and gain information from orally presented material, s/he may fail to benefit from this taped material. Thus, if a teacher chooses to change the input mode of materials, several techniques may be used; however, their effectiveness may be dependent upon the student's skills in gaining information through these other modes. Alternative modes of input to reading textual material include audiotapes, audiovisuals (films, filmstrips, video tapes), and discussions (see Table 3, p. 78).

Several alternative modes to expressing information in writing also exist. Known information may be presented in an oral report, through an oral test, or through the construction of a project that requires synthesis of information about a certain topic. See Table 4 for alternatives to expressing information in writing (p. 83).

Table 5 provides the teacher with a simple organizer for determining how a student's weak areas can be compensated for. If a student is visually impaired, the teacher may provide input by assigning the task orally. If a student has limited hand movement, s/he could report a position on a game board ("blue marker to space 17") rather than attempting to move the marker.

Changing input and/or output modes requires both planning and preparation time. The teacher should not assume that the student will be able to benefit maximally from the alternative mode without instruction. Students may need to be taught how to listen, how to take oral tests, etc., in order to learn or to express themselves optimally in these modes. Thus, the teacher who elects to use another mode must accept the responsibility of making such a decision result in more positive performance than the previous alternative.

Combining/resequencing commercial materials. Commercial materials form the basis for most instruction in elementary and secondary classrooms; however, some students may require more practice on particular steps of a skill sequence, or they may need modifications in the sequence or require a different sequence of skills presented through the chosen curriculum materials. Combining/resequencing materials allows the teacher to develop a curriculum to meet the needs of the student related to practice (number of trials) and developmental sequence. Teacher time is minimized because existing materials are used; however, s/he must have knowledge of the skill sequence in the curriculum areas for which adaptations are needed.

A language arts consultant, when asked by a harried fourth grade teacher how to get through the whole book, responded, "If you feel you have to cover the book - sit on it!" Teachers can increase the motivation of disinterested students tremendously by allowing them to rank order and vote on units or stories. The class chooses which areas or stories are studied first, and may even have "the power" to skip a topic or replace it with one of general interest. If the class has some flexibility as a whole, it is also easier for the teacher to suggest that certain students delete or replace material. Gifted students may use advanced resources; poor readers may use simpler texts; those with limited reasoning ability may concentrate on concrete rather than abstract sections.

Supplementing commercial materials. Occasionally, available materials may not define a task and its components as specifically as some students require. In these instances, the teacher may elect to supplement these materials by preparing materials to teach intermediate steps omitted by the commercial product. Here, the teacher maintains the skill sequence defined by the selected curriculum material and augments the sequence by further specifying the steps of the sequence and writing materials for these steps. This type of adaptation requires more teacher time because curriculum materials are being produced. In addition, to prepare these materials, the teacher must be knowledgeable of the skill sequence and must have knowledge and skill in curriculum development.

Developing curriculum materials. At times, the materials needed for a specific student may not exist, and materials will need to be developed. The teacher then will develop and write materials to teach the needed skills that are presented in the appropriate format and also consider the student's special needs. Although considerable teacher time and expertise are necessary to develop and write curriculum materials, several benefits of this type of adaptation exist. First, the teacher/-developer can control the content presented, the method of presentation and the rate of presentation. Second, the critical factors of content and format can be matched with specific learner characteristics. Third, the material can be highly motivating if student interests are incorporated.

Materials Adaptation Techniques

Specific techniques related to four areas will be discussed: motivation, length of task, complexity of task, and concept load. Ideas presented in each area will progress from simple to more complex in terms of implementation.

Motivation. Motivating students to attack learning tasks is frequently mentioned as a problem at both elementary and secondary levels. A commonly used technique is a game format. Children and youth frequently respond more enthusiastically to formats different from traditional paper-pencil tasks, and games often can provide such formats. Games may be used for drill activities, to provide additional practice, or to accompany the introduction of a new concept or skill. Numerous commercial games are available for a wide variety of concepts or skills, and teacher-made games are common in both regular and special education classrooms. Game boards that are adaptable for several different skills or for the changing skill levels of the student may be developed quite easily by the teacher. Figure 1 shows a game board that might be drawn on a file folder, and the spaces filled with sight words, words to reinforce a specific phonetic skill, math facts, etc. Game pieces (perhaps toy cards) and die could be placed in an envelope and kept in the file folder for easy use and storage. To play the game the student would roll the die, advance the indicated number of spaces, pronounce the word (give the answer to a math fact, etc.) or follow the direction, and then allow the next player his/her turn. Although this example is appropriate for elementary students, the game concept can also be applied at the secondary level.

Several cautions must be addressed in selecting a game format to motivate the student. First, the teacher must be certain that the game provides appropriate practice for the concept or skill being taught. Asking the student to recognize the numerals when the task is addition of three-digit numerals is not appropriate practice, and a game that would incorporate recognition of numerals likely would not help the student with the task. Second, overstimulation of the student in the game situation must be avoided. Some students become so involved and excited with the competition of the game activity that the learning aspect is lost. Third, and closely related to overstimulation, is the complexity of the rules. If the rules of the game are too complex, the student may spend too much time and energy concentrating on the mechanics of the game and too little time and energy on the concepts and skills being taught. Thus, the game activity fails to fulfill its educational purpose. Fourth, the teacher must plan for transfer of learning from the game situation to the task that involves the concept or instruction; thus, simply using a game format may have no effect on use of the skill in other settings unless the student perceives the link between the concepts or skills practiced in the game and those used in a particular setting.

Another technique that may be used to stimulate motivation is media. Most children and youth in schools today have grown up in a multi-media environment. Although schools frequently possess a variety of media, it often is not used as advantageously as it might be. One piece of media equipment found in many schools, especially in special education classrooms, is the Language Master (Bell and Howell). The Language Master is a small, desk-top machine that uses an audio card, thus allowing the student to see a visual stimulus and hear an audio stimulus (or record information orally) at the same time. Although the Language Master is frequently used for drill and practice, it has a wide variety of uses. Anyone interested in exploring the uses of the Language Master is encouraged to obtain the booklet, The World of the Language Master, from a Bell and Howell dealer. Similar machines are produced by a number of other companies.

Teachers also may use slides as an attention-getter. Slides are fairly easy to produce or obtain. Teachers can take their own slides with instamatic cameras. Slides of various parts of the country may be purchased quite reasonably. Use of a copy stand will allow pictures to be taken of small, real objects. Slides of any type may be used to introduce a lesson, to illustrate specific concepts, or to summarize content previously presented.

One readily available piece of media in most public schools is the overhead projector. Most often used in lecture situations, the overhead projector can be used in a number of ways. The stage of the projector can be used to display real objects for a group to see. In teaching math, objects (cubes, for instance) can be placed on the stage of the projector and string or yarn used to group the objects into sets. In this way, the teacher can demonstrate concrete representations of mathematical processes for students. Students may write assignments (handwriting assignments, reports, poems, short essays, etc.) on an overhead transparency for display to a group or class. This type of public recognition may be quite reinforcing for students. Younger students may practice tracing letters and writing on the chalkboard when the image of letters, lines, and spaces are projected there using the overhead projector.

Two other techniques used to stimulate motivation are the use of music and current fads, events, and topics. Music and rhymes are frequently used to teach concepts and skills to young children. All of us probably can recall the rhyme about the number of days in each month or the alphabet song. These rhymes served the purpose of teaching specific information. Creative teachers can still find ways to stimulate learning using these methods. For example, a singing group, the Fifth Dimension, recorded a choral version of the Declaration of Independence on a popular album in the early 1970s. Given that students' motivation to read the Declaration of Independence may be rather low, the choral version might stimulate their attention to this important document of American history. Although economic concepts are of critical importance, many students will be less than enthusiastic about studying those concepts unless they relate directly to their lives. A song recorded by a singing group, the O'Jays, during the early 1970s entitled "Let the Dollar Circulate," will attract students' attention and would be an excellent opening to a unit on economic concepts.

Most teachers are usually quite aware of current fads, events, and topics that might be used to stimulate students' interest. Many songs, rhymes, and jingles from television programs, such as Sesame Street and Electric Company, may be used as teaching techniques to stimulate motivation.

Length of task. Although discussed briefly earlier, several techniques that are easy to implement can be useful in adjusting the length of student's task. An assignment may be divided into smaller units for some students so they actually finish several short assignments rather than one lengthy one. A student who is restless and has a short attention span may be able to complete six problems, then walk across the room to submit his/her paper to the teacher, and return to his/her work station to begin the next six problems. If not given this "legitimate" excuse to break attention and move, the student may seek movement in ways unacceptable to the teacher. The stimulus value of an assignment, particularly a short one, may be increased by mounting the assignment on a piece of brightly colored paper. This will serve to attract the student's attention.

Another way to control the length of assignments is to manipulate the time schedule within a class period or a school day. For example, rather than scheduling one long session to teach math, the teacher may break the session into two shorter sessions, separated by a short break or scheduled at different times during the day. Even within one class period, the teacher may spend 10-15 minutes on one task, switch to another task for a few minutes, and then return to the first task. This time manipulation allows the teacher to break the task into smaller units, thus increasing the chances of maintaining student interest. This scheduling also would allow spaced practice which learning psychology has shown to be superior to massed practice.

Complexity of task. Teachers frequently will need to adapt materials because the task is too complex for the student. If the problem is the size of the steps in which the concept or skill is presented, the modification will involve further specifying the task through use of task analysis procedures (Bateman, 1971; Frank, 1973) and then locating or writing appropriate materials to teach those steps. If the problem is inappropriate sequence, the teacher must resequence existing materials, add materials to provide adequate practice, or locate (or write) supplemental materials.

In some instances, the teacher may determine that the student does not have adequate prerequisite skills to attack the current task. The specific measures to be taken then depend on the needs of the individual student and the nature of the problem. The teacher may abandon the sequence and teach the prerequisite skills; then, s/he may return to the sequence. The teacher may choose to move to a simpler level of task difficulty. For instance, if a student is being asked to spell (reconstruct) the word "government" from oral dictation, the teacher may move to a simpler level of task difficulty and ask the student to recall the spelling of the word by physically rearranging letters to form the word. See Figure 2 for levels of task difficulty and an example of this task. Another alternative available to the teacher is to change the requirements of the task. For example, rather than requiring the student to read an assignment, the teacher might arrange to have the student get the information from a filmstrip or from listening to a group discussion.

Concept load. Although concept load is closely akin to task complexity, it deserves attention as a separate area. Teachers frequently present a number of concepts to students at one time. For example, the "r" blends often are taught together. Some students may be unable to grasp several different "r" blends when they are presented together and may require that only one "r" blend, e.g., "fr", be taught at one time. By teaching one blend at a time rather than teaching a group of blends, the concept load has been reduced. Isolating and teaching single concepts requires a knowledge of the skill sequence and task analysis procedures. The best descriptions of procedures to isolate single concepts are in Becker, Engelmann, and Thomas (1975) and Martorella (1972).

Self-Pace Options

A curriculum strategy for accommodating special needs of learners is the provision of activities that allow students to progress at their own rate. The materials may include curriculum materials with or without adaptations. Instructional formats for the management of individualizing instructional programs include learning activity packets, contracts, learning centers, job sheets, activity cards and program (Smith & Bentley, 1975).

Learning activity packet (LAP). One individualized instructional option is the Learning Activity Packet (LAP) which can be used in elementary or secondary schools. A LAP is a teacher written learning program containing all materials needed by an individual or small group for study of a specific topic. It allows the teacher to present content in whatever way will account for varying student abilities, interests, learning styles and developmental levels. LAPs should be self-explanatory and structured to allow students to progress at their own rate. A LAP includes the following basic components: title, purpose, rationale, objectives, pretest, learning activities, post-test and enrichment activities (Masters, 1975).

Contracts. Learning contracts are agreements between individual students or group of students and the teacher regarding the conditions associated with task completion. Contracts permit students to work independently and control the conditions surrounding task completion through their own efforts. Mutual involvement of the student(s) with the teacher in selecting learning tasks and reinforcers and in negotiating learning conditions are critical factors in the development of successful learning contracts. Learning contracts should include clear understandable statements of the task to be accomplished, the conditions of the situation such as length of time, length of assignment; resources, list of activity alternatives, criteria, the consequences of the student's action and signatures of the student and the teacher, and others if involved with the contract. Additional information relevant to contract terms is reported in the section of this module entitled "Monitoring Academic Achievement."

Learning centers. Learning centers are usually specific areas in a classroom which contain a collection of printed materials, media and realia focusing on a special topic of interest. Learning centers can be designed in a variety of arrangements and provide a flexible means of meeting different students' needs, interests, achievements, ability levels and learning styles. Activities appropriate for the student's ability and interest level are organized for independent use. Often a variety of activities is provided so students of varying levels may use the learning center completing different sets of activities selected by the teacher. Learning centers may include written or oral exercises, visual tasks, media production, tactile explorations and scientific observations. They may be used for units of instruction in a prescribed course of study or as a self-directed activity for independent study. Learning centers should include the following components: a topic, rationale, objective, directions for use of center and for individual activities, resources for accomplishing the activities and assessments. Directions for operations of the center should be clear, specific and precise.

Job sheets. Job sheets are assignment sheets that present a clear sequence of work to be completed by students. Job sheets generally focus on one objective with specification on the task assignment such as reading passages, workbook pages, activities and comprehension checks to be completed in order to reach that objective, directions, procedures or instructions. Task assignments should include the sequence of activities to be completed and resources. Job sheets allow students to use many curriculum materials related to a specific skill in the planning of a sequence of activities to accommodate students' learning. Reliance on a single curriculum or material isn't necessary. Students work independently at their own pace and assume responsibility for monitoring their own progress.

Activity cards. Activity cards are individual cards that provide directions for learning activities and generally organize around a particular theme or topic. Each card presents a particular question to be studied or objectives to be learned, provides directions for the activity and identifies the resources needed. The cards may be arranged sequentially from simple to more complex or they may be arranged by topic or skill. A student selects an activity from the group of cards and completes the activity independently. Students may complete a specific number of activities or they may complete all activities in order to develop a specific skill or concept.

Program instruction. A number of commercial materials are available in a program instruction format. The salient features of program instruction include (a) subject matter is broken into small amounts frequently referred to as frames; (b) the frames are arranged in an incremental sequence; (c) student responds frequently; (d) the student receives immediate feedback regarding the correctness of the response; (e) each student varies the rate of responding. Program materials are available in print format such as texts and workbooks, mediated forms presented on the screen of video equipment or in a format placed in a manually operated piece of equipment.

These self-pace options share several characteristics. Each can be used for individual instruction, can be designed to accommodate unique learner needs, allow students to progress at their own rate, may be used for elementary or secondary students and may be designed very simply or quite elaborately. Despite these commonalities some differences do exist. Each option may differ from one or more of the other options on one or more of the following dimensions: degree of student involvement, in specification of objectives and conditions, level of teacher involvement, level of structure inherent within the option, and selection of specific content areas.

TABLE 3

MATERIALS ADAPTATIONS

Type of Adaptation	Skills Required	Student Need(s)	Technique	Rationale
Change in format; task remains same	Knowledge of task	Short attention span	Reduce size of assignment to be completed at one time; teach student to "chunk" large assignment into smaller units. - Cut page of 30 math problems. Student then completes six small, manageable assignments rather than one large, overwhelming assignment. - Teach a secondary student who is required to read lengthy chapters to "chunk" the information into manageable units by dividing the chapter at the major sections.	The student experiences satisfaction of completing tasks rather than failing to complete lengthy assignments. The student is allowed to break his/her concentration legitimately as one short assignment is completed, submitted to the teacher, and another begun.
		More explanation of task	Model the task - Provide a model of the task from beginning to end for the student. "Think aloud" as the task is modeled so the student can observe the thought processes that must take place.	The student will hear (or see) a model of the task that shows exactly what steps s/he must follow in order to complete the task. These steps are not left to chance, but are explained clearly and thoroughly.

TABLE 3, continued

MATERIALS ADAPTATIONS

Type of Adaptation	Skills Required	Student Need(s)	Technique	Rationale
Change in format; task remains same (cont.)			- Provide visual models of the task that allow only one interpretation; (examples in commercial materials sometimes may be confusing and may allow for an erroneous conclusion about the task.	
		Additional or simplified directions	State the directions for task completion clearly ("Circle the words that go together") rather than giving a set of directions ten sentences long).	Directions given clearly and simply are more apt to be interpreted correctly. Extraneous comments and lengthy directions may be forgotten more easily than one clear concise statement.
		Difficulty focusing on single stimulus item (page too crowded)	Separate stimulus items so students can focus on single items more easily - Cut page apart so fewer items are in the student's view at one time. - Provide a template or mask so student can isolate one stimulus item at a time.	Separating, chunking, or masking items allows the student to respond to the task as it was originally designed. Reduction of incoming stimuli allows the student to focus his/her attention.

TABLE 3, continued

MATERIALS ADAPTATIONS

Type of Adaptation	Skills Required	Student Need(s)	Technique	Rationale
Change in format; task remains same (cont.)			- Teach student to "chunk" material and only attend to smaller portions at one time.	
Change input and output modes	Planning techniques Knowledge of alternative delivery and student evaluation modes	Unable to receive information through mode being used (e.g., unable to read social studies text)	Change input mode - Teach student how to gain information from orally presented material. - Have the student listen to taped version of a written text. - Use audiovisual materials (films, filmstrips, video tapes, etc.) that contain the same or similar content. - Have the student participate in or listen to a group discussion of the content.	Reading is not the only mode through which information may be received even though it is the most common mode used in school settings. Students who know how to listen often can gain the content effectively from listening even though they cannot read a text containing that information.
		Unable to express known information in written form (reports, themes, tests, etc.)	Change output modes - Have the student present the information orally rather in a written form.	By selecting alternative output modes, the student may be given credit for known information without being penalized for poor writing skills.

TABLE 3, continued

MATERIALS ADAPTATIONS

Type of Adaptation	Skills Required	Student Need(s)	Technique	Rationale
Change input and output modes (cont.)			- Teach the student how to take written tests. - Teach the student to take oral tests; then give tests orally. - Select other alternatives for expressing the information that minimize writing, yet require the same (or a similar) degree of analysis and synthesis of information. For example, the student might describe orally (and tape record) the results of a science experiment rather than writing a detailed summary.	
Combining/ resequencing published materials	Knowledge of skill sequence in curriculum areas	More practice on particular steps of skill sequence or different sequence of skills	Materials from two or more curricula providing instruction and/or practice of needed skills are combined. For example, practice exercises may be selected from one curriculum to augment a curriculum that provides only a few practice exercises.	Resequencing materials allows the teacher to develop the curriculum to meet the needs of the student related to practice (number of trials) and developmental sequence. Teacher time is minimized because existing materials are used.

TABLE 3, continued

MATERIALS ADAPTATIONS

Type of Adaptation	Skills Required	Student Need(s)	Technique	Rationale
Combining/ resequencing published materials			Materials from two or more curricula may be used to develop a sequence different from that present in either curriculum. Materials within a single curriculum may be resequenced to teach several levels of a single skill in sequence (rather than spread throughout the school year) or to provide additional practice.	
Supplementing published materials	Knowledge of skill sequence Knowledge and skills in curriculum development	More practice on particular steps of skill sequence	Write additional materials that provide for specific need of exceptional students to augment published materials.	Some commercially available materials may not provide a skill as specific as some exceptional learners require. Therefore, the teacher may need to write materials for intermediate steps in the skill sequence.
Developing curriculum materials	Knowledge of skill scope and sequence Knowledge and skills in curriculum development	Skill, format, or special need that is not considered in existing curricula	Develop and write materials that teach the needed skill, are presented in the appropriate format, or consider the student's special need.	Materials written by the teacher for a particular student potentially can meet all the special considerations necessary for that student.

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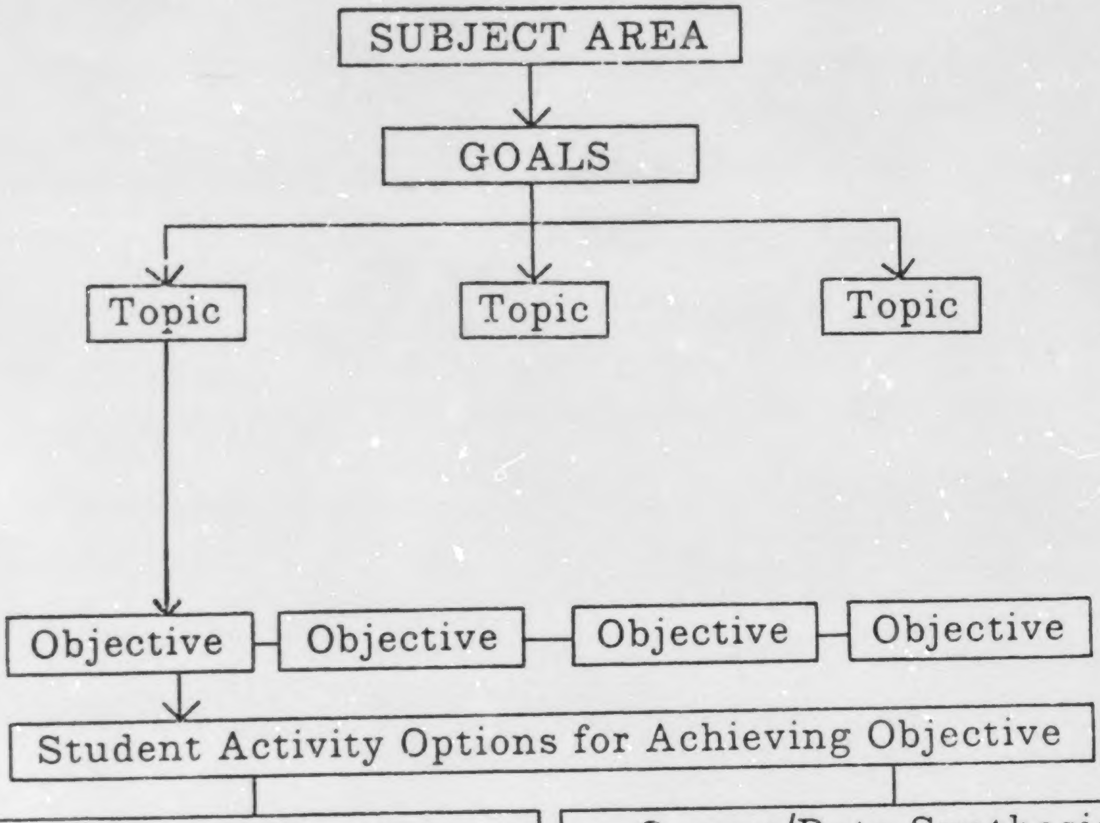
Table 4

DESIGNING INSTRUCTION



Input/Data Collection

VIEW/OBSERVE

- A. Visuals
  - bulletin boards
  - banners
  - posters
  - transparencies
  - slides
  - films/filmstrips
  - flashcards
  - TV
  - graphs
- B. Community events
  - field trips
  - dramatic presentations
- C. Nature/animals

READ

- books
- comic books
- pamphlets
- posters
- newspapers
- bulletin boards
- flash cards
- reports
- wall graffiti
- letter

SMELL/TASTE/TOUCH

- objects
- textures
- foods
- temperatures
- chemicals

LISTEN

- radio
- records
- TV
- speeches
- lectures
- debates
- discussions
- dramatic interpretive readings
- concerts
- interviews

TRY/DO/USE

- games
- experiments
- exercises
- manipulative materials

Output/Data Synthesis

MAKE/CONSTRUCT

- diorama
- collage
- scroll
- sand painting
- diary
- pictograph
- media presentation
- maps
- models
- timelines
- leaf prints
- paintings
- food
- clothing
- bulletin board
- banner
- graph
- word wall
- drawings

VERBALIZE

- oral report
- panel
- debate
- discussion
- games
- brainstorm
- oral questions and answers

SOLVE

- puzzles
- mazes
- problems
- equations
- games
- riddles

WRITE

- theme
- research paper
- report
- workbook answers
- blackboard problems
- poems
- essays

PERFORM

- simulation
- role play
- sociodrama
- concert
- pantomime
- interpretive reading

Source: Module on Instructional Management, Teacher Training Program, Educational Service Center, Region XIII, Austin, Texas.

TABLE 5

ADAPTATION OF TASKS AND MATERIALS

	VISUAL	AUDITORY	MANIPULATIVE
TEACHER INPUT			
	WRITTEN	ORAL	MOTOR
STUDENT RESPONSE			

Figure 1

Multiple-use Gameboard

Decorate cover with racing photo.
Laminate.
Include separate envelopes for various skills.
Provide tape-recorded and written directions.

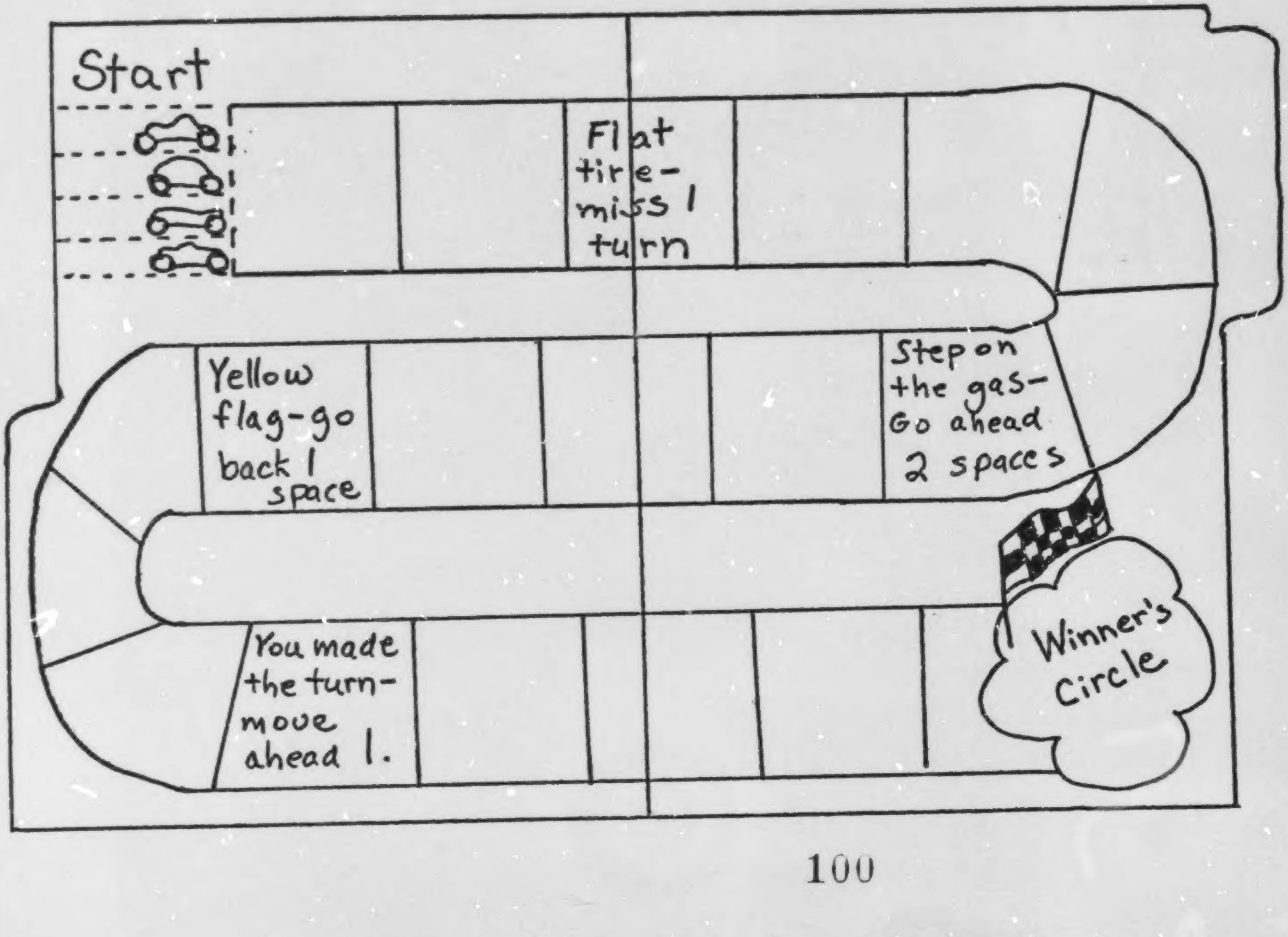

Start
Flat tire- miss 1 turn
Yellow flag-go back 1 space
Step on the gas- Go ahead 2 spaces
You made the turn- move ahead 1.
Winner's Circle

FIGURE 2

LEVELS OF TASK DIFFICULTY

Matching	Student matches model with correct spelling of word. government government govermet
Recognition	Student recognizes (points to) correct word. Teacher: "Which word is government?" Student: (Points to correct word) government democracy goverment
Recall	Student forms correct spelling of word by physically rearranging letters to form the correct spelling.
Reconstruction	Student reconstructs the word from memory. Teacher: "Spell 'government.'" Student writes the word.

Resources

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Learning Activities

Task #1

Bring in three learning aids, supplementary materials or games which have been published in your students' content area. Have students work in small groups to determine what change(s) in format would be necessary for any atypical learner to use the material. Have them consider physical and sensory impairment, behavior disturbances, and academic ability well above and below the norm.

Task #2

Present students with the following list of classroom situations. Develop a list of input/output mode options.

Classroom Activity	Student Characteristic
foreign language class, recitation	student stutters under pressure
math class, blackboard "race" to write multiplication facts (teams)	student confined to wheelchair
oral round-robin reading	remedial reader, decoding poor
biology test	illegible handwriting, slow rate

Task #3

Have each student develop an instructional game based on the principles presented in the "motivation" section. If possible, your students should find a young person for whom the game is appropriate and field test it. Perhaps a public school class in the content area would be willing to have your students come in for an hour for one-on-one instruction. The classroom teacher would be a good source in suggesting skills to focus on in game construction. Students should then present their games to each other in class, noting what worked, what they would change, whether they felt that their pupil had learned anything and what adaptations might be necessary for atypical learners.

Task #4

Have students brainstorm ideas for self-pacing options for your course (in which they are currently enrolled). Given the material you have outlined on the syllabus to be covered during the semester, what possibilities are there for self-paced instruction? Students should evaluate suggestions made in this section and add suggestions of their own. (You may gain insight into your course, and possibilities for future instruction!)

Task #5

Give each student a copy of a well-developed unit plan in your content area or in any content area if you teach generic skills. Ideally, use units the students have written themselves for you or another teacher. Have each student add to the unit plan by incorporating at least two of the six options for self-pacing. These additions should follow the guidelines presented earlier, and should be written complete with 11 resources, worksheets and other materials.

Task #6

Assign a topic to the class (e.g., humorous poetry, World War II). Then give a description of a classroom at their grade level such as, "Your class consists of 27 sixth graders. The reading range is approximately second to twelfth grade. Two students receive remedial help in reading, one has a specific reading disability, three are academically gifted and one student has a significant hearing loss." Ask students to choose one self-pacing option and develop the material, complete with all resources, with this class in mind. Make sure that all options are chosen by someone. Provide one class period for the display of student-made materials. You may wish to establish a checklist of criteria for the appropriateness of the material to the topic and hypothetical class.

SCHEDULING

Rationale

Savage and Mooney (1979) identified the importance of the management of various school-day components in teaching special needs students in regular classrooms. They noted:

> Management refers to the manipulation of time, space, materials, records, and other elements that directly affect . . . instruction. At the best of all organizational and management matters in the classroom are the children. While the mainstreaming of special needs pupils into regular classrooms may extend the dimensions of organizational and management, mainstreaming does not change the basic nature of the process that teachers have been concerned with for a long time. (p. 279)

The importance of predetermined, structured schedules for emotionally disturbed boys was supported by Gallagher's (1972) research. Scheduling has often been identified as playing a key role in successful mainstreaming programs, as the cornerstone of both instruction and communication (Blankenship & Lilly, 1981; Hardman, Egan, & London, 1981).

A career planning counselor reports that many teachers who leave the teaching field excell in management roles. This is not surprising when one considers that teachers must juggle time schedules, limited resources, personnel and instructional techniques to create cohesive days and comprehensive semesters or years. The ability to organize is essential for efficient, effective teaching. This section explores several components involved in the broad area of scheduling. Who is involved in creating smooth time schedules for the exceptional student? How can time be managed effectively by the student? How can the teacher schedule ancillary personnel to the maximum benefit? What should be known about material resources in order to schedule them efficiently? How can the teacher schedule instruction to maximize learning?

Body of Knowledge

Time

Who assumes the responsibility for the students' time in the school day? Is a productive day one in which every minute is scheduled? Some students can complete assignments within the time frame given by the teacher. Other students are able to choose times to complete assignments and pursue self-directed activities. A few students need to be very structured; that is, their work responsibilities, expected outcomes of their work, and time limits must be clarified in a clear, firm manner. This latter group of students will need to learn how to be self-directed. For them this is a task just as mathematics is.

In addition to establishing schedules within the classroom for their own subjects and group work, teachers of exceptional students must work cooperatively with special service personnel. One teacher scheduled her days so rigidly that when four of her students were identified as gifted, the only time she would allow for them to work with the resource teacher was during recess. It should have been no surprise when three of the students dropped out of the gifted program.

The following suggestions (adapted from Charles & Malian, 1980; Turnbull & Schulz, 1979) for classroom and resource teachers should be considered when scheduling instruction for exceptional students.

Classroom Teacher

1. The teacher must identify several blocks of time when the student could be away from the regular classroom for instruction in the resource room in such a way that the student gains the most from both settings.

Justification: The teacher must consider carefully the goals and objectives for the student and arrange his/her schedule so that all goals are addressed -- either in the regular classroom or the resource room. In addition, the exceptional student should be allowed the same privileges as other students, e.g., recess, and should be allowed to participate in activities such as music, art, physical education, etc.

2. The teacher needs to indicate which regular classes would be most appropriate for handicapped student participation based on the student's goals, the content and structure of the classes, the grouping arrangements, etc.

   Justification: Factors which must be considered when determining the regular classes in which the exceptional student will participate include: whether the class content is presented is appropriate for the exceptional learner, whether the degree of structure is compatible with the student's need for structure, whether the groupings within the classroom can accommodate (or can be adapted to accommodate) the student, etc.

3. Classroom instruction for the subject being remediated in the resource room should be complementary to the focus of remedial instruction. Classroom teachers and resource teachers may not use exactly the same approach, but they should coordinate instruction as much as possible.

   Justification: If the same or similiar techniques were used in both the resource room and the regular classroom, the student not only will have additional opportunities to practice, but opportunities to generalize skills learned in the resource room will be more readily apparent.

Resource Teacher

1. Students should be scheduled into the resource room during the subject period that is being remediated. They should not be scheduled for assistance during music, PE, art or recess. Justification: If the student's deficit is such that remedial instruction is indicated, resource room instruction should be scheduled when that subject is being taught in the regular classroom to avoid having the student experience frustration during regular class instruction. To avoid motivational problems, interference with music, P. E., art, and recess should be avoided when possible. Aesthetic, physical, and recreational experiences should be as much a part of the school day for exceptional learners as they are for nonhandicapped learners.
2. Planning done with classroom teachers should be scheduled during the day rather than before or after school. The program will not be efficient if the resource teacher does not have adequate time to communicate with classroom teachers. Justification: Planning that is part of a teacher's schedule will be more efficient than relying on unscheduled time. Both classroom teachers and resource teachers should include shared planning time in their schedules so the exceptional child's instructional program can be coordinated. Planning done during the school day, rather than before or after school when other activities are occurring will be most efficient.

3. It is vital that the principal be aware of the need for scheduling of planning time with classroom teachers.
   Justification: The principal sets the climate for the school, so his/her attitude often influences that of other teachers. In addition, he/she generally arranges the schedule, so his/her level of awareness of the need for scheduling shared planning time is critical if it is to be included in the schedule.
4. When time limits for students vary, the schedule should be posted to let students know the amount of time they have to complete a task, and what they are to do when they complete a given task.
   Justification: By posting time limits and directions for activities following task completion, the teacher communicates expectations to students. It is easier for them to know what to do than to try to figure it out without teacher direction.
5. When activities are varied, each student will need different materials. Younger children need these set out in advance or distributed quickly; older students can pick up materials from a specified storage area.
   Justification: Teachers who are prepared with materials available will find the transition from one activity to the next much easier. Students will not have to search for materials, but will know where to find them.
6. Designated work areas are often assigned by the teacher; the student may be scheduled daily or for longer periods of time.
   Justification: The teacher's arrangement for work areas and scheduling within these areas can control how well students

work within the areas. Work areas should be quiet areas emphasizing on-task behaviors, and students should be scheduled based on their needs, attention span, and level of independent work habits.

A scheduling system within the classroom is essential for open or highly structured classrooms. Scheduling can be done rigidly or flexibly. Open classroom environments need a system for the number of students and their passage to the learning/activity centers. A reservation system could be arranged as described. Cardboard keys placed in book pockets indicate how many students can be in a center at one time. A student going to the center removes a key from the pocket chain and returns it as s/he leaves the center. If there are no keys in a pocket, students know to choose another center. (See Figure 3).

Signs posted by centers reminding students of occupancy numbers can be used in lieu of a chart. (See Figure 4).

Scheduling decisions should also be based on the academic context at learning/activity center. If teachers expect students to work at each center within a week, then teachers may impose part of the schedule and let students choose additional center visits. If the centers do not include academic context, teachers may allow more flexibility in attendance. A kindergarten classroom was set up with learning centers for math, language arts, listening to records, easel painting, library books, playing store and science. The teacher had a limit-of-four card system, but no other stipulations. He noticed after several weeks that one boy had attended the math center seven times as often as any other, and had never been to three of the centers. Students were then required to attend each center once (per week) before repeating one.

FIGURE 3

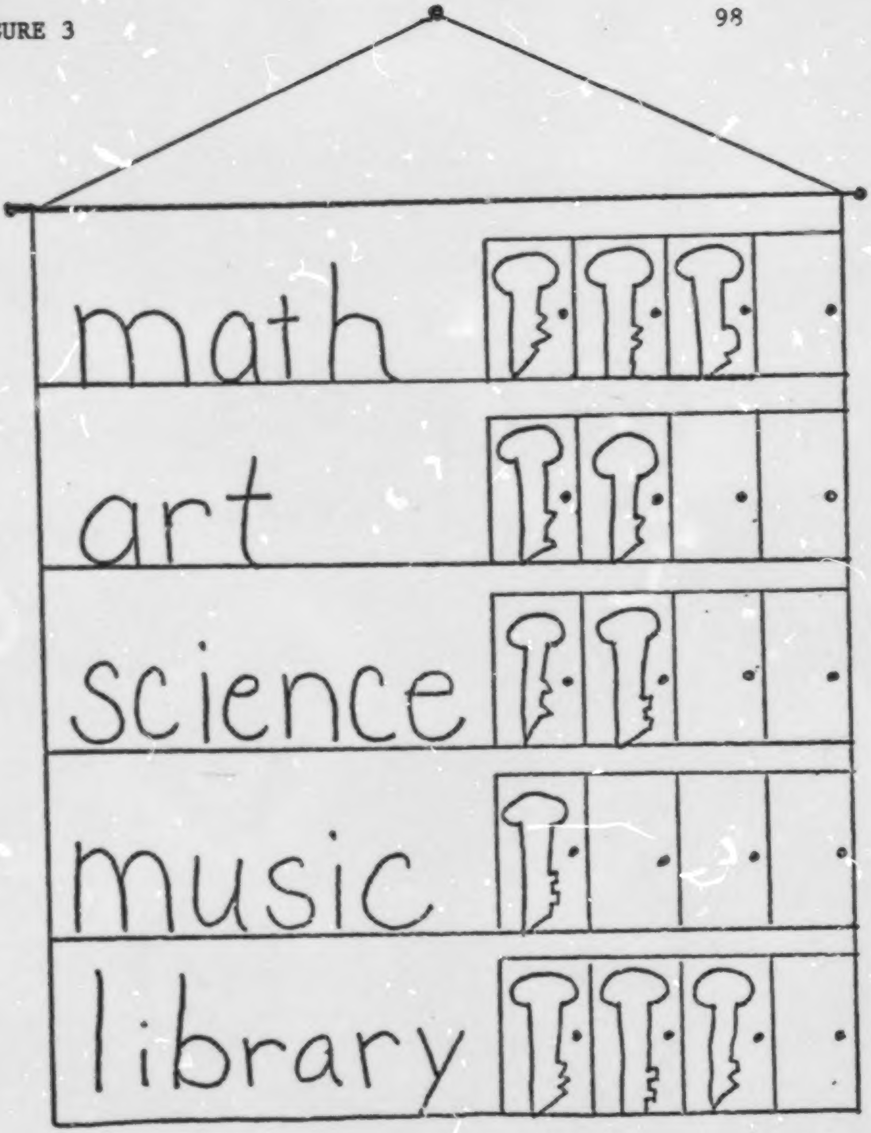
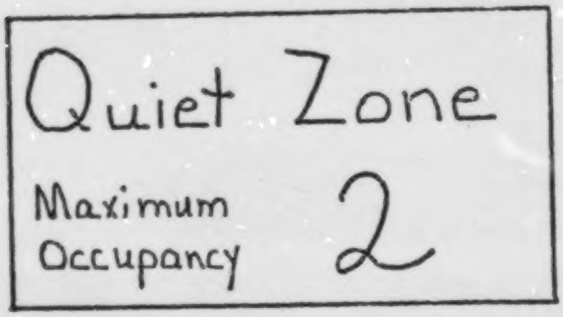

math
art
science
music
library

FIGURE 4


Quiet Zone
Maximum
Occupancy
2

When scheduling adolescents into regular classes, additional considerations need to be made by regular classroom teachers and resource teachers (Gearheart, 1980).

1. When planning the student's schedule and course load, it is important to make certain that a student does not have an overload of "heavy" courses each semester. The difficulty of the course may relate to amount of reading or required math ability, the degree or level of conceptualization and the amount of homework or formal papers. It may be necessary at times to consider reduction of the total course load.
2. It is often necessary to advise students to take less difficult courses or to enroll with a teacher who is known to provide alternative ways of completing a class.
3. It may often be necessary to have the resource teacher offer a special section of a course if regular class teachers cannot accommodate a group of students. It is wise for scheduling purposes to try to group all students needing language arts in one hour while those needing social studies content would be enrolled as a group in another hour.
4. The resource teacher may need to substitute a text at a lower readability or conceptual level which presents the same basic content for use by the student in the regular classroom.
5. When pre-enrolling incoming sophomores it is wise to go to each of the feeder junior highs 4-6 weeks prior to the close of school to enroll incoming students for next fall. It may be wise to hand schedule exceptional students. If students are enrolled by computer, teachers should double check for errors prior to the

beginning of fall semester. This will allow time for needed corrections.

6. It is helpful to work with school counselors when designing student schedules. The counselor can provide information about the acceptance level of regular class teachers and/or which course will provide the best instruction for a handicapped student.

Some teachers have a daily opening exercise when they review the class activities as a schedule is written on the chalkboard. Such a schedule serves as an advance organizer to allow the student to see how the class hour/day will be organized. A few students, sometimes those who have learning disabilities or behavior problems, need individual written schedules. Students who have time concept difficulties, those who are highly anxious when they are uncertain about the day's routine, or those who are learning to accept responsibility of task completion and deadlines will benefit from an individual schedule. The organization of time and tasks as represented on written schedules can also provide a model for students who need to acquire self-monitoring skills.

Written schedules should contain time periods and tasks to be accomplished. They can also be a record of accomplishments providing students with a psychological boost. The following techniques are suggested as guides in effectively scheduling individual students with special needs (Gallagher, 1979).

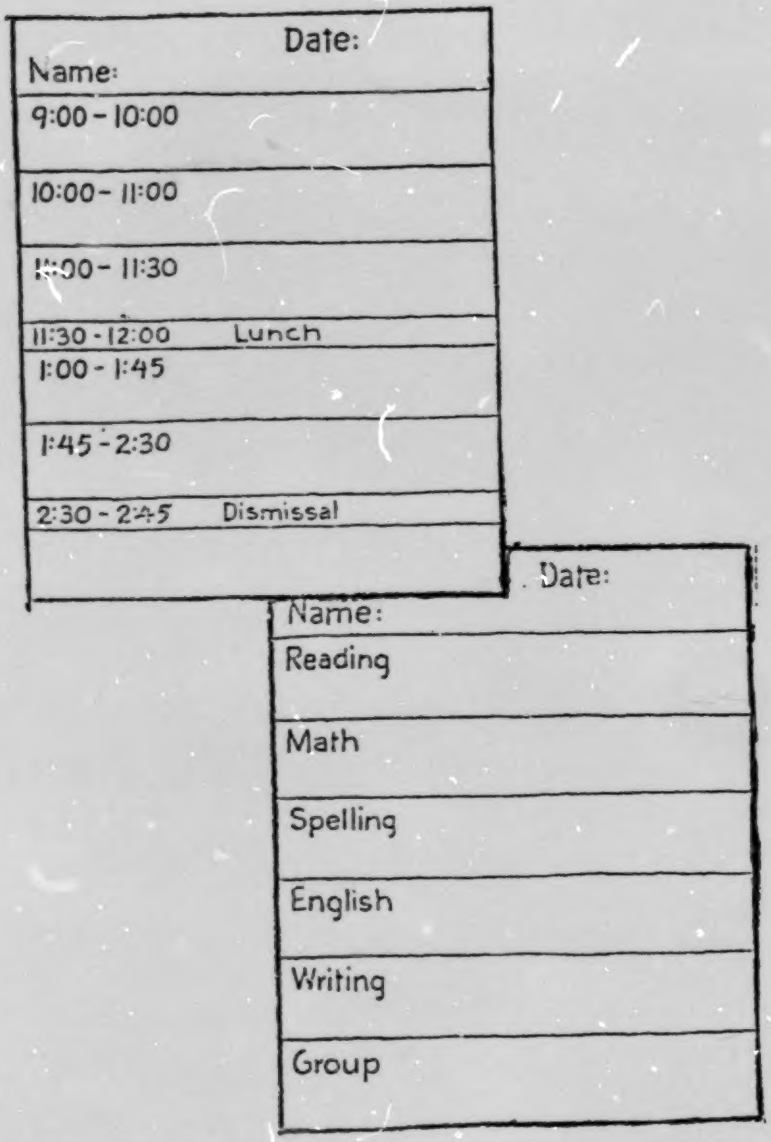
1. Provide a written daily schedule. The format will depend upon the student's level of understanding. Many teachers design a schedule using a subject or time block format. Duplicated copies of the schedules are made in advance with sections completed as they pertain to each student. Teachers also save the individual schedule sheets because they

provide an excellent record of each student's progress. Sample formats are given in Figure 5.

Schedules can be placed on students' desks, placed on a clipboard hanging from a hook attached to the side of the desk, or taped to a side of the study carrel. Non-readers can have their work placed in a series of folders representing time blocks. Worksheets within the folders can be numbered according to the order in which they are to be completed. Numbered slips of paper can be attached to materials such as books, manipulative aids, or filmstrips which cannot be easily placed inside the folders. Thus, the folders and numbered sheets are the daily schedules for the very young students or non-readers. Task expectations and deadlines are established and presented visibly in advance. The student may not always like the work which is to be completed, but s/he knows what is planned and what the options are. The schedule is a "black and white" arrangement; however, adjustments can be made if circumstances indicate the need for on-the-spot rescheduling. Inherent in the schedule is careful teacher planning for work directed to the student's current level of ability.

2. Alternate high probability tasks with low probability tasks. The Premack principle can be used with regularity; that is, of any two reresponses, the one which is more likely to occur is the preferred response, referred to as a high probability behavior. It can reinforce the less frequent response, the low probability behavior. If, of two academic subjects, reading is preferred to mathematics, then reading is the high probability behavior and is scheduled after math, i.e., make the high probability behavior contingent on the low probability behavior. The student's preferred and less preferred activities are alternately

FIGURE 5



Name:	Date:
9:00 - 10:00	
10:00 - 11:00	
11:00 - 11:30	
11:30 - 12:00	Lunch
1:00 - 1:45	
1:45 - 2:30	
2:30 - 2:45	Dismissal

Name:	Date:
Reading	
Math	
Spelling	
English	
Writing	
Group	

scheduled. If a student has no preferred academic activities, favorite non-academic activities can be scheduled as high probability behaviors.

3. Schedule work which can be finished by the end of the school day. The student needs the opportunity to begin each day with a "fresh slate." This technique appears to reduce anxiety in some students as they will not have waiting periods to worry about any of their previous day's unfinished work. They know where they "stand" before they leave at the end of the school day. Students have been heard to say after a difficult day, "Well, tomorrow I can start all over again."

4. Plan for leeway time. Allow time for feedback and new concept development after estimating the time needed for the students to complete their activities. Also allow a period of time to cover unexpected situations such as legitimate delays in work completion, students having difficulty in putting on wraps, students collecting materials to take home, students and teachers gathering loose ends, and for the teacher's over-estimation of time commitments. If the student time is planned to the last minute before dismissal, it could be a disadvantage. Some students panic when they anticipate missing the usual dismissal time; others rush in their efforts to finish, making careless errors; thus, a day ends negatively. Occasionally a student's work will not be completed with the leeway time, but these situations are managed on an individual basis.

5. Require students to complete a task before beginning another one. A general rule of thumb should be conveyed to the student: "Finish one task before beginning another." Jumping from task to task or completing only preferred tasks may further a student's inability to cope with the demands of the environment. Furthermore, the student could find it

very difficult or confusing to resume an incomplete task. The technique is not intended to restrict work habits. After students integrate productive work habits into their lives and accrue personal and academic successes they can become more flexible in work behavior.

6. Provide time reminders. The daily schedule designates the times allotted for assignments. Some students need reminders due to inadequate work habits, time orientation problems, or for other reasons. A concrete time reminder can be used in lieu of the teacher's verbal reminders. Thus, the student is encouraged to monitor time commitments. A kitchen timer can be set for the amount of time allotted to the assignment or the number of minutes remaining to complete an assignment. The audible sound of the timer may also serve as a stimulus to remind students to continue working. Timers can be set on students' desks or in a place in view of the students. Some students have carried set timers when they go to the playground or free-time area so they have a physical reminder of the time allotted for their activities.

Individual cardboard clocks or clock faces stamped on paper can be used as time reminders for assignments or special periods when the student will be out of the room. A colored felt pen can be used to outline, highlight, or underline special times on a student's daily schedule.

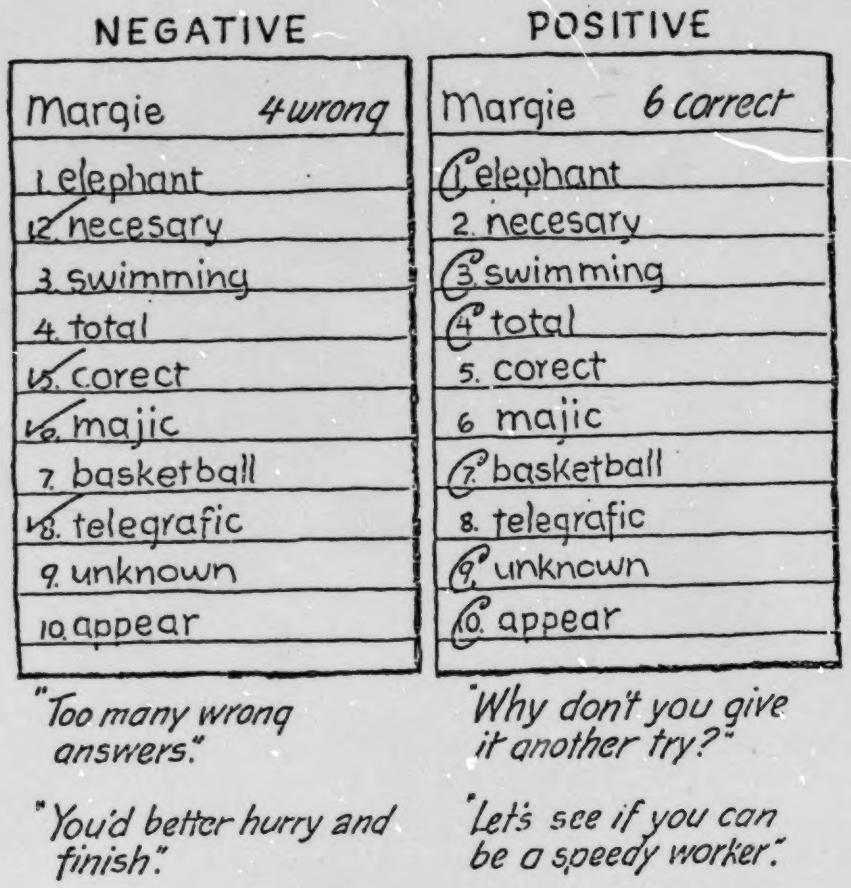
7. Include feedback and evaluative marks with a student's daily schedule. Some daily schedules are designed with space for evaluative marks and/or comments. Other schedules are accompanied by an evaluation sheet. Students should receive written as well as verbal feedback throughout the day. Additional forms containing evaluative information are given in many classes at the end of the day or week.

8. Provide positive feedback. Many students have been repeatedly subjected to papers graded by check marks to indicate incorrect responses. Since errors received attention, the negative aspect of the work was emphasized. If there were a number of errors on the page, the results could be an excruciating and delibitating experience. This negative grading technique can be reversed by marking all the correct responses with "C" or "OK." Sometimes a teacher may be able to stand by the student and say, "Great," and "Good," or "OK" as a paper is graded. This additional feedback can add encouragement to students who are described as defeated children. Smiling faces or stickers can be substituted for "C" marks on the papers of young children.

Only the number of correct responses is indicated at the top of the worksheet or the number correct can be written above the number wrong. Encouraging statements can be substituted for warnings. It should be noted that feedback cannot be equated with reinforcement. Feedback is knowledge of results which may or may not be reinforcing. The substitution of positive feedback for negative is demonstrated in Figure 6.

When students are able to achieve success through a daily scheduling system they can move into a weekly schedule format. Initially, the weekly schedule may be completed with activities for two days at a time; later expanded to three days; and subsequently the full week's activities. As the student grows in ability to manage time and task completions, the written schedules can be dropped. Before this is done, it is wise to include the student in the scheduling process. Students involved in this process learn self direction and self management. Figure 7 presents an example of a one week schedule.

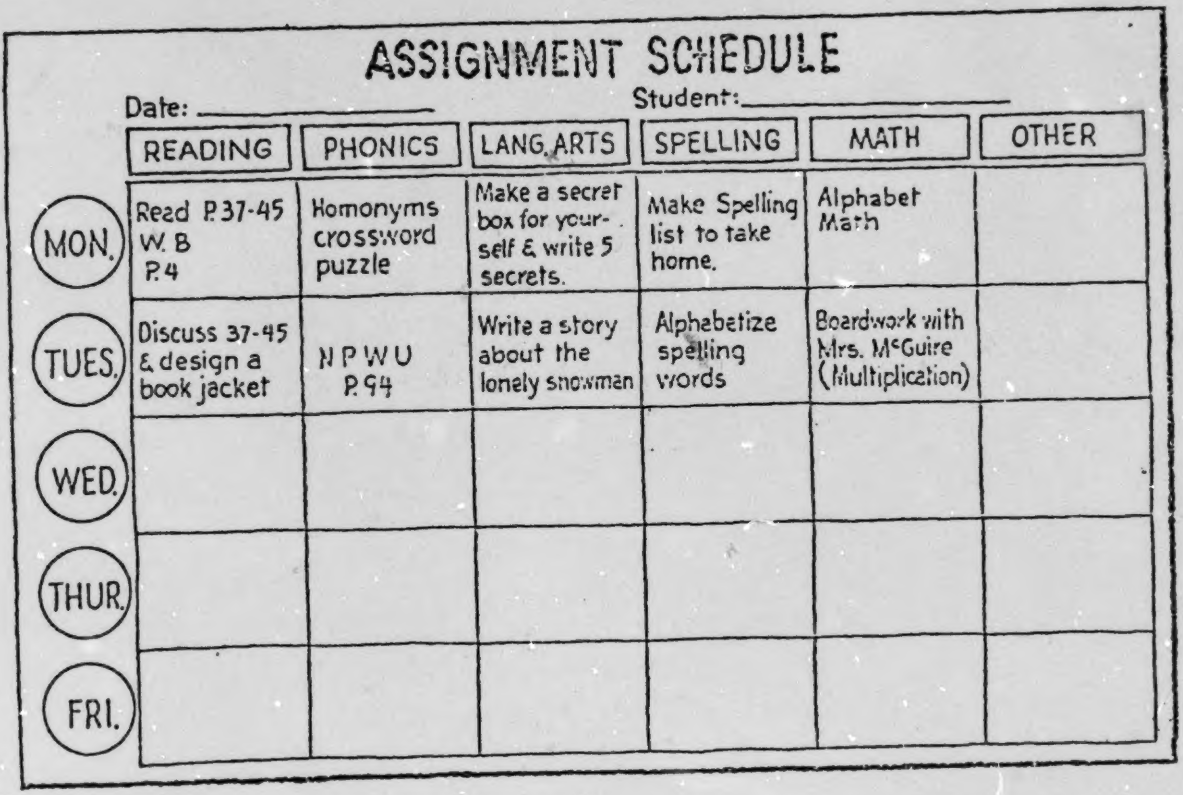
FIGURE 6



NEGATIVE	POSITIVE
Margie 4 wrong	Margie 6 correct
1. elephant	C 1. elephant
✓2. necesary	2. necesary
3. swimming	C 3. swimming
4. total	C 4. total
✓5. corect	5. corect
✓6. majic	6 majic
7. basketball	C 7. basketball
✓8. telegrafic	8. telegrafic
9. unknown	C 9. unknown
10. appear	C 10. appear

"Too many wrong answers."	*"Why don't you give it another try?"*
"You'd better hurry and finish."	*"Let's see if you can be a speedy worker."*

FIGURE 7



ASSIGNMENT SCHEDULE

Date: ____________ Student: ____________

	READING	PHONICS	LANG. ARTS	SPELLING	MATH	OTHER
MON.	Read P.37-45 W. B P.4	Homonyms crossword puzzle	Make a secret box for yourself & write 5 secrets.	Make Spelling list to take home.	Alphabet Math	
TUES.	Discuss 37-45 & design a book jacket	N P W U P. 94	Write a story about the lonely snowman	Alphabetize spelling words	Boardwork with Mrs. McGuire (Multiplication)	
WED.						
THUR.						
FRI.						

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Personnel

A teacher's most valuable resource may be other people; it is essential to develop this resource to its full potential and to schedule personnel effectively. In addition to the ancillary personnel available in the school, district personnel are often available to assist in a classroom for purposes of diagnosis, suggestions for teaching various content, and impartial observation of learning or behavior problems. Some schools hire a paraprofessional to be used by the staff on a rotating or needs basis; other classrooms have a full-time paraprofessional assigned. Often parents are invaluable in the assistance and expertise they lend to the classroom. Figure 8 suggests a format for eliciting parental support. Other valuable resources include civic clubs, parent organizations, grandparents, senior citizen groups, high school family life classes or other higher grade classes interested in working with younger children. As mentioned in a previous section, students in upper grades or secondary classes may actually understand their subject matter better by teaching it to students at a more elementary stage of the same subject.

The use of outside personnel in relationship to the whole topic of mainstreaming has interesting possibilities. Many of the suggestions may be applicable to the use of volunteers in school program.

1. Parents of exceptional students may be excellent resources in providing information on techniques that can be used to adapt instruction or motivate their children. They may also offer suggestions on behavior management techniques that are successful in the home.
2. Parents may help educate a class on the handicapping condition of their child or adolescent.

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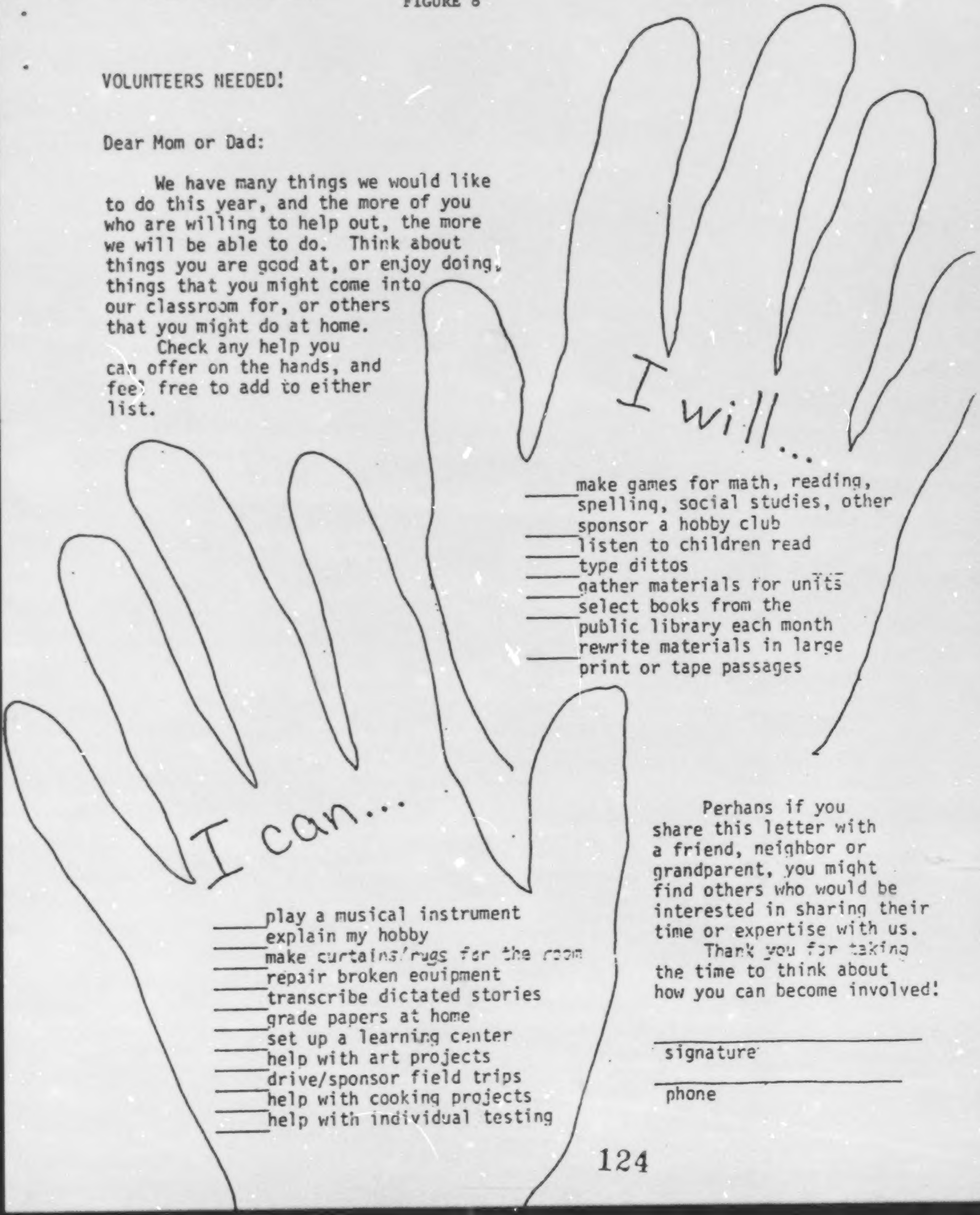
FIGURE 8

VOLUNTEERS NEEDED!

Dear Mom or Dad:

We have many things we would like to do this year, and the more of you who are willing to help out, the more we will be able to do. Think about things you are good at, or enjoy doing, things that you might come into our classroom for, or others that you might do at home.

Check any help you can offer on the hands, and feel free to add to either list.



____ make games for math, reading, spelling, social studies, other
____ sponsor a hobby club
____ listen to children read
____ type dittos
____ gather materials for units
____ select books from the public library each month
____ rewrite materials in large print or tape passages

____ play a musical instrument
____ explain my hobby
____ make curtains/rugs for the room
____ repair broken equipment
____ transcribe dictated stories
____ grade papers at home
____ set up a learning center
____ help with art projects
____ drive/sponsor field trips
____ help with cooking projects
____ help with individual testing

Perhaps if you share this letter with a friend, neighbor or grandparent, you might find others who would be interested in sharing their time or expertise with us.

Thank you for taking the time to think about how you can become involved!

____
signature

____
phone

3. Parents can assist by adapting curriculum materials for exceptional students, e.g., copying worksheets in larger print for visually impaired students.

4. Older students or adults from the community may serve as role models of handicapped individuals who are successful in a particular field. In some cases these resource people may be invited specifically to discuss how they overcame a potential disability; it might be even better to have people who are experts in a certain field (pediatrics, plumbing) speak about their work without specific reference to exceptionality.

5. Parents or other volunteers may assist with correcting papers to allow the teacher more direct contact time with students. Clear, thorough, understandable directions should be given to the volunteer.

6. Peer tutoring and cross-age tutoring can be quite effective. However, teachers should avoid having the same student always be tutored, while others are always the teachers. This can be especially destructive to the self-concept of the handicapped student who is always "helped." One way to avoid such a stagnant routine is to have students work to identify their own strengths and weaknesses. A student at the University of Kansas has suggested a bartering system, in which every student must have a skill to offer in return for assistance received. Turnbull and Schultz (1979) suggested a resource bank based on student interviews to determine "who's good at what." A full description of peer and cross-age tutoring can be found in the module on that subject in this series.

7. Exceptional students who have developed a particular skill may be used as a resource within the classroom. Turnbull and Schultz (1979) reported that a blind fourth grader was able to use his knowledge of the

Numberaid, a pocket abacus, to help classmate with the concept of place value.

Many other school personnel, such as teacher aides and support staff (counselors, specialists in remedial education, and others), may also be resources to the regular classroom teacher. The teacher and the other staff member should carefully plan that individual's involvement in the classroom. The objectives of both individuals regarding the support person's involvement must be considered.

In scheduling a teacher aide, the teacher should first consider the tasks the aide will carry out in the classroom as well as the ones that are beyond the responsibility of the aide. Once that has been done, the teacher can begin to plan the aide's schedule -- including him/her in working with or monitoring small groups of students practicing a skill, correcting papers, preparing (dittoing, typing, etc.) materials, supervising independent workers or students on break, etc. The teacher must remember at all times the parameters of the aide's role and must present clear, concise, thorough directions in relation to all tasks.

In the actual scheduling of additional personnel in the classroom, there are several factors to keep in mind.

1. People should be asked to assist only in those areas where they have volunteered. Asking a parent who wants to help with art projects into the classroom during reading groups to check seatwork is a good way to lose that assistance and alienate a parent.
2. Untrained personnel may not feel comfortable jumping right into the existing structure. Initial observation and perhaps some low-keyed training could enhance their involvement.

3. Do not schedule all outside assistance for the same day. Students will repond much better to evenly spaced additions, and will tend to be less disruptive or overly excited if people come into the room regularly, rather than all on one day.

4. Schedule people who are truly an asset in the classroom to supplement your own strengths and weaknesses. Team teaching may be the answer in social studies periods if you can work with someone with a great amount of expertise in this area, or if he/she can assist with behavior problems within a large group setting. On the other hand, if the person who is helping needs a great deal of supervision, schedule him/her for a relaxed, smooth time in the day.

Materials and Resources

There is such a wide variety of material and resources available for use with exceptional students that teachers must be able to evaluate the quality and usefulness of these for use with their specific population. Wilson (1978) provides criteria for evaluation of materials. In selecting instructional materials, decisions should be made regarding curriculum variables, student variables, teacher variables, prerequisite learning skills, and level of motivation provided by material. Wiederholt & McNutt (1977) have proposed a set of guidelines for evaluating materials which consists of static evaluation, relevance of material for student needs, readability level of material and composition complexity, and background level of student's language. Brown (1975) has proposed the use of a basic questioning approach which she calls a Q-Sheet. This provides the teacher with a framework of 30 questions to analyze materials so that appropriate evaluations can be made.

Materials that should be available in the classroom include a complete set of the regular classroom standard texts with teacher's guides. Materials will be needed that relate to the specific problems that the handicapped student is encountering. Wiederholt, Hammill and Brown (1978) stated that it is often difficult for teachers to know what materials they should purchase. Teachers might plan using the follow suggestions:

1. Prepare a list of materials that are needed.
2. Priority rank the items.
3. Compare prices of other materials that claim to teach same skills.
4. Compare and evaluate contents of each material.
5. Determine if this material is appropriate or if it might be cheaper for teachers to make materials.

Equipment is an important aspect of educational resources for students. Each classroom should include (or have access to) a tape recorder, record player, head sets, and overhead projector. Additional equipment may be used depending on the needs of the students. Caution is given to including "fad equipment" that does not serve a needed instructional purpose. Many school districts have resource centers where materials and equipment can be checked out for short or long term use. New teachers especially may not be aware that there are films, books, tapes, adapted materials, maps, visual aids and much more that is available. Principals, secretaries and media specialists may be helpful in locating these resources.

Scheduling the use of material resources involves some planning. First, the teacher should reserve needed materials well in advance. A call the day before or day of intended use is also a good idea, since reservations are not always recorded accurately. Within the classroom the teacher should work out a system such as the following and insure that the class understands and follows it:

1. Materials A can be used by anyone at any time.
2. Materials B must be checked in and out.
3. Materials C can be used only with teacher permission.

Instruction

Instruction is more than assigning. It is more than matching students with materials, even materials adapted for their needs. As helpful as readability formulae and informal assessment may be in making appropriate assignments, there comes a time when teachers must provide instruction. Sometimes this instruction is in material that is difficult for the student; it may contain abstract concepts, unfamiliar vocabulary or complex structure. Herbert (1982) suggested five steps to enable "Learn to read to learn" instruction:

1. Provide supporting instruction (teach vocabulary, develop outlines, explain structures).
2. Provide supporting contexts (supplementing texts, related experiences).
3. Provide supporting interactions (teacher/student, student/student).
4. Provide supporting expectations ("I expect you to be successful, and I'll show you how").
5. Provide supporting flexibility (for instruction and response).

Within a classroom setting, a number of instructional modifications easily incorporated into total group presentations can benefit handicapped and non-handicapped learners alike. In general, these modifications require neither lengthy advance preparation time nor complex skills. Four instructional techniques will be described: advance organizers, checking, cueing, and extracting pertinent content.

Advance organizers. Advance organizers, statements that preview essential vocabulary or content to be learned, have been advocated as an effective teaching technique for a number of years (Ausubel, 1963; Mayer, 1979). Because of the characteristics of many exceptional learners, it appears safe to assume that they would be crucial to the learning of these students.

Recent research (Lenz, 1982) has shown that regular teachers can be trained to develop and to use advance organizers. However, Lenz also found that to be effective with secondary LD students, the students had to be informed about the advance organizer and what purpose it served. In other words, the structure of the advance organizer and it's place and purpose in the lecture had to be explained.

Lenz developed the following process to train teachers to develop advance organizers. The development process is:

1. Inform students of advance organizers -- announce it, state its benefits, and suggest that students take notes.
2. Identify topics or tasks -- identify major topics or activities and identify subtopics or component activities.
3. Provide an organizational framework -- present an outline, list or narrative of the lesson's content.
4. Clarify action to be taken -- state teacher's actions; state student's actions.
5. Provide background information -- relate topic to the course or previous lesson and to new information.

6. State the concepts to be learned -- state specific concepts/ideas from the lesson and state general concepts/ideas broader than the lesson's content.
7. Clarify the concepts to be learned -- clarify by example and by non-example; caution students of possible misunderstanding.
8. Motivate students to learn -- point out relevance; be specific, personable, and believable.
9. Introduce vocabulary -- identify and define new terms; repeat difficult terms and define again.
10. State the general outcome desired -- state objectives of instruction/learning and relate outcomes to test performance.

Advance organizers establish a framework or a boundary for a particular lesson and detail the relationship of the current lesson to information already known (the lesson just completed) and to information that will be presented later (e.g., next week's lesson). They may be written or oral and may take several forms. One type of advance organizer may be a preview where the primary topic and its subtopics are discussed briefly. For example, at the beginning of a lesson, the teacher may say, "Today, we are going to study the causes of the Civil War. They are . . . ."

Another type of advance organizer specifies relationships. Here, the current topic is related to information already known as well as that to follow. For example, (using the Civil War causes example again) the teacher might say, "As we discuss these causes, remember the situation that existed in the United States immediately before the Civil War, that is during the period we just studied. Economically, the country was . . . . Politically, we were . . . . In terms of social conditions, the people felt . . . . We will see how these conditions of the 1850's contributed to the causes of the war, and we will see later what effect the war had on the country."

A third type of advance organizer explains vocabulary. Here, new and important vocabulary for a lesson and/or reading assignment is explained. This explanation of vocabulary is critical for exceptional learners when one considers that language problems, either written or oral (or both), commonly characterize exceptional learners. Vocabulary to be explained may be unfamiliar words or words with a special meaning in the context of a particular lesson. In relation to reading assignments, advance presentation of vocabulary may reduce the reading difficulty of a passage for the student. As special vocabulary in content texts (especially social studies and science) are often polysyilabic and technical in nature, the exceptional student (e.g., the student with reading problems) may ignore these "big" words and, thus fail to comprehend the material fully. Further information about advance organizers can be found in the resources list at the end of this section.

Checking. Moran (1980) found that secondary teachers asked for few checks of understanding in their classrooms; thus, exceptional students, unless they recognized a need for further information and asked a question, were expected to comprehend content material and directions immediately. One classroom strategy helpful to exceptional learners is to check frequently for understanding of content material and, especially, for understanding of directions for assignments. Teachers may ask for one or more class members to repeat directions for the entire class, or they may give directions and model the activity to reinforce the directions. In some instances, the teacher may choose to check understanding of directions individually with one (or more) student(s) after other students have begun working. Obviously, a combination of these three techniques also may be used. In addition to checking initial understanding of directions, the teacher should check the student's progress on an assignment periodically. Although most students reach an effective solution when a problem is encountered, exceptional learners may try limited solutions and either fail to select an effective solution, or stop working altogether. The teacher may check the student's progress unobtrusively, or s/he may establish specific checkpoints with the student. For example, if a student is asked to write a three paragraph theme, s/he could write a rough draft of a single paragraph and submit it to the teacher for a quick check before proceeding to write the other paragraphs.

Cueing. Cueing is a procedure where the teacher prompts the exceptional learner to use a previously learned technique or strategy in relation to a specific task. Research with one group of exceptional learners, learning disabled students, has shown that in many instances, they fail to use effective strategies; however, when prompted, many LD students use the same strategies as non-learning disabled students (Wong, 1980). Thus, one technique that classroom teachers may use to help exceptional students in the regular classroom is that of cueing them to use previously trained skills and strategies with current tasks. For example, a student assigned to write a paragraph may be cued by his/her teacher to monitor for punctuation errors (a previously learned skill) after the paragraph is completed. The regular classroom teacher may cue a skill that has been previously learned in the regular classroom setting, or s/he may promote generalization of skills learned in the special education setting by cueing those skills in the regular classroom setting.

Extracting pertinent content. When substantial amounts of content information must be stored for later retrieval, exceptional learners who experience difficulties deciding what content is important may fail to remember any of that content as they read or listen. If reading is difficult and laborious, they rarely read beyond the fourth page of a 20-page chapter. When asked to listen to a 40-minute lecture and take notes, they may either "tune-out" after a few minutes, or they may take notes, but only record the first three or four words of each of the teacher's statements. Teachers can help students extract pertinent content in several ways and reduce the reading, writing, and listening skills needed to perform successfully in the regular classroom.

In relation to reading assignments, the teacher could "highlight" with colored pen the primary concepts of a chapter. The student then could read this copy of the chapter with the pertinent content highlighted. Thus, the amount of reading and the reading time would be reduced, and the student would still acquire the important concepts. The teacher also could teach the student how to use contextual cues (e.g., headings, bold face type, italics, etc.) to identify the pertinent content for himself/herself. A learning strategy, Multipass, has been developed and tested with LD and low-achieving adolescents (Schumaker, Deshler, Denton, Alley, Clark, & Warner, 1981). This strategy teaches students to make three passes (each with a specific purpose) through a textbook chapter. Students are taught to use headings to provide an organization for their study of the chapter and to use contextual cues to signal important information.

For lectures, the teacher could provide the student a partial outline that the student would complete as s/he listened. In addition, the teacher could write key vocabulary or concepts on the chalkboard and teach the student to identify key words (such as "important," "major," "crucial," "five reasons," etc.) and to identify nonverbal cues teachers use to stress key points (voice, hand gestures, facial expressions, writing notes on chalkboard, etc.).

These techniques require little teacher preparation time and few complex skills, and they may be implemented without calling attention to the exceptional learner and the adaptations made for his/her needs. One of the greatest advantages to these suggestions is that they may enhance the learning of all students, not just those with special needs.

Groups

Learning to interact, cooperate and work as a group member is part of a person's development. Shaw (1971) has suggested several hypotheses with supportive data relevant to individual versus group performance. He indicated that the presence of other students increases the motivation of an individual student; group decisions are superior to individual decisions when they can build upon a number of individual decisions; groups produce more and better solutions to problems than do separate individuals; groups require more time to solve problems than does an individual; group members learn more quickly than individuals.

Learning situations should be structured so that a handicapped student receives increased acceptance from peers. When students become emotionally committed to each other, acceptance and appreciation for each other increases. Johnson and Johnson (1978) collected data indicating interpersonal benefits of cooperative learning, in addition to higher achievement for slow and average students. They found learning experiences promote more social acceptance and friendship between handicapped and non-handicapped students; cooperative learning* promotes greater social skills and higher achievement in all students; cooperative learning promotes higher self-esteem and better acceptance of oneself.

When using cooperative grouping, the teacher's role (Johnson & Johnson, 1978) should be to

1. Structure learning experiences cooperatively to ensure that the group is heterogeneous with handicapped and non-handicapped students in same group. This cooperative goal structure promotes positive interaction between students even though the group is diverse.

2. Specify a structured role within the cooperative groups for the handicapped student. Many mainstreamed handicapped students will be anxious about interaction with non-handicapped peers.

3. Train all students in giving assistance, tutoring, teaching and sharing skills. In order to work efficiently in a cooperative learning group, students need to be able to help and teach each other.

4. Make the requirements for the students reasonable. There are several ways to adapt lessons for students with markedly different achievement levels so they can participate in the same cooperative group.

    a. Use different criteria of success for individual students.

    b. Vary the amount each group member is expected to accomplish.

    c. Give group members different problems and use the mean percentage worked correctly as the group's score.

    d. Use improvement scores rather than the actual performance.

    e. Support positive relationships and experiences among students.

---

*The module by Johnson and Johnson in this series presents a method of training teachers to use cooperative learning.

Resources

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Learning Activities

Task #1

Elementary

Students should form small groups based on preferred grade level K-6. Each group should complete all steps of the following task:

1. Decide what learning centers you would want to have in your classroom by mid year (some teachers prefer not to introduce all centers in the beginning).
2. Make a general outline of what type of content and materials would be in each center (e.g., math center; reinforce basic concepts in book, worksheets, unit blocks, abacus, individual job cards).
3. Decide how often centers will be changed. Some teachers change each center each week, others prefer a rotating center.
4. Devise a plan for recording attendance, task completion or degree of involvement at each center.
5. Devise an efficient and interesting method of scheduling students at the centers.

Secondary

Students should form small groups based on an interest in developing a particular unit of instruction (e.g., foreign language units on idioms, culture, cuisine, politics). Each group should complete the following task:

1. Design a learning center for the unit. Outline general content and materials for the unit (e.g., cuisine: worksheets, menus, cookbooks, simulated dining experience).
2. Plan for incorporation of the learning center into the unit, along with small group work, pupil diads, whole class lectures, etc. Work out a one-week time schedule for delivery of this unit.

Task #2

Jake has severe personal and social adjustment problems. He has been described by various teachers as irresponsible, hyperactive, disruptive and a general pain in the class. He has been in self-contained classroom for behaviorally disordered students for two years, because it was thought that he needed a great deal of structure, routine and individual attention. However, this year Jake has been mainstreamed into your classroom.

Secondary

You are Jake's homeroom (advisor base, study hall, etc.) teacher as well as his ____________________ (your subject) teacher, so you have him for two hours a day. It is up to you to work with Jake in attending all of his classes, including going to the resource room for behaviorally disordered students for portions of two classes. How would you help Jake establish and follow a personal schedule?

Elementary

You are Jake's _____________ (your grade) teacher. In addition to being in your classroom, Jake participates in music, library and physical education. He attends the resource room for behaviorally disordered students one hour a day. Knowing that transitions are especially difficult for Jake, how will you help him remember where he is supposed to be when? Who will be responsible for seeing that he gets there?

Task #3

Have students grade each other's assignment for a test or written assignment you have given the class. (Do this before discussing positive feedback.) Return papers to owners. Discuss feelings associated with getting the papers back. Was anyone embarrassed? Did anyone learn anything from the graded paper? Was any rapport established through the process? Elicit suggestions for enhancing the grading process, including positive feedback. Return papers to graders, and have them apply insights from the discussion regarding the papers.

Task #4

Ask each student to design a letter to parents asking for their assistance in the classroom. Content will vary according to grade level and perceived needs of the teahcer. Next, have students write a follow-up letter to parents who have responded, indicating how, when and where they will be incorporated in the classroom.

Task #5

Invite an area principal to discuss with your class how a new teacher in her/his district would go about obtaining materials available and ordering new materials.

Task #6

Have students choose a chapter from the textbook you use in teaching their class. Using the concepts of advanced organizers, checking, cueing and extracting pertinent content, have students augment the text for a hypothetical learning disabled student in the class. Discuss whether any of these techniques seem helpful to them in their learning of the material this semester.

MONITORING ACADEMIC ACTIVITIES

Rationale

Knowledge of results has long been known to facilitate performance (Harris, 1972). To some students, knowledge of results alone is sufficient reinforcement. For exceptional students and others experiencing difficulty in school, continuous knowledge of their performance is important to them to counteract past failures, and it is essential for teachers who must use that knowledge to plan for instruction. When a student receives instruction in more than one instructional setting, it is essential that the individuals in those settings, i.e., teachers, communicate frequently about the student's progress. The techniques described in this section illustrate ways that student progress can be communicated to the student, teachers, and parents.

Before examining the way in which a student's academic activities can be monitored, it would be helpful to think about what learning demands are placed on students at various grade levels. As students advance through their school career, progressing from elementary to junior high or middle to senior high schools, the nature of the demands changes and responsibility for learning shifts from the teacher to the student. A discussion of monitoring strategies for students, especially for exceptional students, will have little relevance unless consideration is given to the differences in demands in these settings as well as to differences in the developing individual. Although the following discussion is not intended as an extensive review of elementary and secondary settings, it will provide a context for the material presented in this section.

Body of Knowledge

Elementary School Settings

In elementary schools (grades K-6), learning activities are primarily teacher directed and managed, with an initial emphasis on learning through listening and doing. As students acquire reading skills, the emphasis shifts to acquisition of information through reading. Writing, as a technique to demonstrate that information has been acquired, also increases in importance throughout the elementary years. Although responsibility for learning rests primarily with the teacher during these school years, a frequently-mentioned goal is that of independence -- the student will become an independent learner. Early emphasis on acquisition of the basic skills (reading, writing, and mathematics), it is believed, will prepare the students to expand their learning and to explore new topics on their own initiative, thus establishing them as independent learners.

The teacher's role in this setting initially is directed to teaching the basic skills that students will use throughout the remainder of their school career and beyond. However, in addition to presenting basic skill instruction, teachers (among other tasks) must be able to monitor student performance, evaluate the effects of instruction, and make decisions about future instruction based on their observations. Simply monitoring and evaluating the effects of instruction, however, is not enough. If independence in learning is a desired outcome, the teacher also must be able to transfer some responsibility for these activities to the student. Thus, teaching students how to monitor their own performance becomes a critical skill for teachers if the goal of producing independent learners is to be realized.

Secondary School Settings

As students enter secondary schools (grades 7-12), demands on their reading, listening, and writing skills increase, and they are expected to assume responsibility for their own learning. Moran (1980), in a study of secondary core content classes (e.g., language arts, science, social studies), found that the predominant teaching method is the lecture. She also noted that students have few opportunities to respond verbally in class; thus progress is assessed primarily through written products. In addition, teachers seldom ask questions to check students' level of understanding, infrequently provide feedback, and rarely provide advance organizers of lesson or class session content for students. Comparison of these data with teacher self-report data gathered from the same teachers indicates that they perceive themselves asking more questions of students and lecturing less than the observation data suggest they do.

These data indicate that if secondary students are to be successful, they must respond to increased demands on their listening and writing skills. The emphasis at this level also has shifted to acquisition of content, with only minimal attention directed to acquisition of skills. Thus, while reading skills receive little attention, the demand on these skills increases.

The teacher's role in the secondary setting reflects the shift in emphasis from acquisition of skills to acquisition of content. Students are expected to function more independently without teacher monitoring. Thus, teachers, while assuming responsibility for delivery of content, must also be prepared to teach additional independent work behaviors -- teaching students how to monitor their behavior, to assess their own performance, and to ask for assistance when needed.

Given such variable demands on the student, what is the best way to monitor whether or not the student is indeed learning? The following sections explore some possibilities for having the students monitor themselves, for having the teacher monitor student performance, and for developing a cooperative system between the student and teacher.

Student Self-Monitoring

Self-monitoring for feedback and reinforcement. Self-recording is one method used to help students obtain immediate feedback. Wolfson (1979) found that when working with a single subject the amount and accuracy of the student's work improved when the teacher praised her and she simultaneously charted her own performance. Broden, Hall and Mitts (1971) found the effects of self-recording varied with the student. For one student self-recording clearly affected study behavior. However, for another student self-recording reduced talking out behavior only initially.

Hardman, Egan and Landau (1981) suggested the use of self-evaluation with gifted students. Their suggestions are applicable in many situations where students may be evaluating projects, reports, or even their own tests. The steps involved in their procedure include brainstorming items that should be included in evaluation, selecting the most important items from the list, modifying group lists for individual needs, and adjusting study emphasis in accord with evaluation results.

Self-monitoring of errors. Deshler (1974) studied ability of learning disabled adolescents to detect errors in their own or other students' performance. The learning disabled students demonstrated skill in detecting and correcting errors but seemed to lack consistent strategies for monitoring performance. It is important for students to learn to monitor their work as it has implications for employment practices and situations for life adjustments.

Alley and Deshler (1979) provided a list of techniques to assist students in monitoring their work.

1. Teacher should not assume student can monitor own work. Time should be spent demonstrating how to check or monitor different types of academic assignments. Key areas where behavior is most likely to occur should be indicated.
2. A certain percentage of each work session should be allowed for checking assignments. Most assignments will take more than one proofreading.
3. Point systems have been effective in encouraging students to check (monitor) their work.
4. Teachers should provide general feedback to help students focus on errors. Example: In a written assignment a teacher would put a check by the paragraph that contains the error(s). The student then takes the responsibility of identifying the specific error and correcting it.
5. A student's ability to monitor can be improved by giving immediate feedback on what has been accomplished and corrective feedback before the next assignment is attempted.

Teacher Monitoring

As exceptional students have spent their school time in both regular and special education settings in recent years, teachers (both regular and special) have expressed concern over grading procedures for these students. Traditionally, grading procedures have involved letter grades reported in individual courses at six-week, nine-week, or semester intervals. In contrast, in many special education programs, progress is generally noted by completion of specific units of instruction or development of specific competencies and is most often reported verbally or in checklist fashion to parents and (occasionally) to the student.

As students progress through school, evaluation is based increasingly on reading ability and written examinations. When this situation exists, exceptional students, who often have difficulty with reading and/or writing tasks, may not have an opportunity to demonstrate their knowledge of the material being evaluated. Thus, the traditional grading and evaluation system of the schools places exceptional students at a distinct disadvantage.

Alternative grading procedures. Vasa (1981) suggested alternative grading procedures for exceptional adolescents in secondary schools. These alternatives, which are quite applicable to other grade levels, will be discussed briefly here; for more extensive information, including suggestions for implementation, refer to the reading by Vasa included in this module.

1. Pass/fail system. A pass/fail grading system generally identifies the minimal competencies the student must complete in order to pass a course. Completion of those minimal competencies results in a passing grade while failure to meet those competencies results in a failing grade. Generally, when minimal competencies are used as the criteria for a passing grade, those competencies (or the activities required to meet those competencies) are communicated to the student. The tasks, learnings, and outcomes are known so that the path and effort necessary to obtain a passing grade are evident. Competition is reduced because distinctions are not made in students' levels of accomplishment

of the competencies beyond whether they did or did not meet the minimum competencies.

2. Letter or numerical grades. Many teachers will have no alternative but to use traditional letter or numerical grading systems already used in their setting. In using this system with exceptional learners, teachers should establish the criteria for each letter (or numerical) grade and avoid comparing exceptional students with nonhandicapped students. The criteria specified may be a certain number of assignments, projects, or tasks and/or a certain level of performance (95% or higher -- A, 86-94% - B, 76-85% - C, etc). If criteria are clearly established, student performance need only be compared to the criteria, thus eliminating the need to compare them to other students.

3. Checklists. Special educators (and in some school systems, regular educators) have used checklists of skills to evaluate student performance for some time. Checklists of skills may be available or may be prepared from the scope and sequence charts of specific curricula used in the school, or they may be purchased (generally along with banks of objectives) commercially (e.g., Meyen, 1976; Individually Prescribed Instruction, Wisconsin Research and Design). Frequently, textbooks for graduate and undergraduate courses include lists of skills that can be used in checklist form to evaluate student progress (e.g., Alley & Deshler, 1979; Carnine & Silbert, 1980; Silbert, Carnine, & Stein, 1981). Directions and examples of skill checklists can be found in Pasanella and Volkmore (1982). Detailed checklists of skills paired with careful evaluation of student performance can provide very specific information regarding a student's performance. With a checklist system,

teachers, students and parents are provided documentation of very specific performance. Such information is valuable in identifying specific areas of progress as well as areas in which further instruction is necessary.

4. Contracts. Mutual agreements between the teacher and the student of specific levels of performance to obtain specific grades are frequently used (e.g., Axelrod, 1977; Gearheart & Gearheart, 1978). Contracts generally specify the type, amount, and quality of work to be completed by a student for a specific grade. The contract generally will include signatures of the individuals involved (teacher and student) and may include timelines and a monitoring system. Contracts should include clear, specific statements (understandable to both the teacher and the student) of the tasks, the outcomes of the completion of the task, and the standards by which the task will be evaluated. Contracts, because they are mutual agreements between teachers and students, also may be considered a "cooperative" monitoring technique. They will be discussed more fully in the next section.

Daily and Weekly Monitoring

Continuous monitoring of student progress, especially of the progress of students experiencing difficulties in schools is critical if instructional time is to be maximized. If continuous data are available to the teacher, instructional decisions can be based on demonstrated changes in learning rather than on "hunches." In addition, the manner in which the progress information is collected can serve to inform the student of his/her progress, to inform other teachers who meet with the student, and to inform the student's parents. For example, when an exceptional student completes tasks in the resource room, the of the competencies beyond whether they did or did not meet the minimum competencies.

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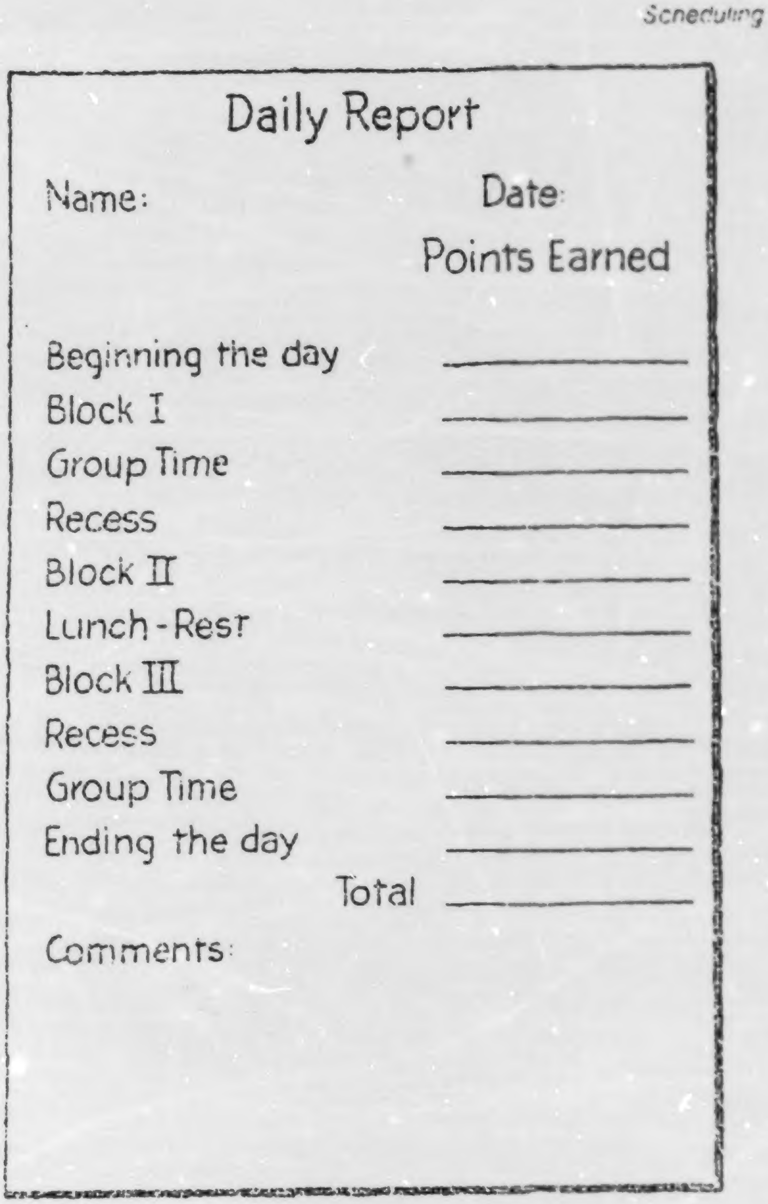
Weekly reports might also be made to parents or teachers. Generally, teachers decide what academic area(s) or behaviors to target for inclusion on the report, rather than recording every available piece of information. A sample weekly report for is included as Figure 12.

Reports of the student's progress that are transmitted on a daily or weekly basis should be: (a) positive in nature, (b) easily understood by those who receive them (Is the report intended for the student, special education teacher, regular classroom teacher, or the parent? Is the report constructed so this individual can understand it?), and (c) easy for the sender to complete. The reports may be sent by anyone who is monitoring the student's progress to another person who needs the information. Teachers should consider these possibilities (these are not meant to be limiting).

Cooperative Monitoring

Monitoring student progress also can be construed as a process that requires participation of both the teacher and the student. In a system where teachers and students cooperate in evaluating student progress, there is structure for teacher expectations as well as student needs. Cooperative monitoring may include student-teacher conferences, log books of assignments in which both parties make entries, or group-planned checklists where the teacher is merely another member of the group. However, the most flexible, adaptable and interesting approach to cooperative monitoring is the contract.

FIGURE 9



Scheduling

Daily Report

Name: Date:

Points Earned

Beginning the day ______________

Block I ______________

Group Time ______________

Recess ______________

Block II ______________

Lunch-Rest ______________

Block III ______________

Recess ______________

Group Time ______________

Ending the day ______________

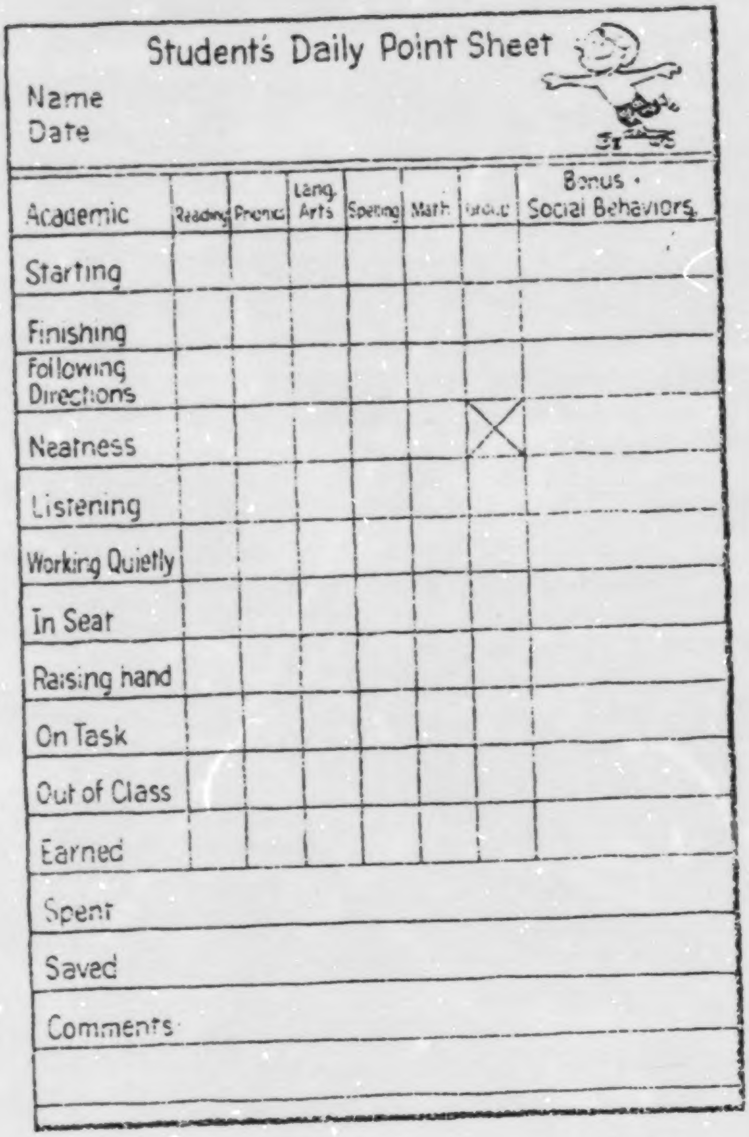
Total ______________

Comments:

From: Gallagher, P. A. Teaching students with behavior disorders: Techniques for classroom instruction. Denver: Love Pub. Co., 1979.

FIGURE 10

Scheduling



Student's Daily Point Sheet

Name
Date

Academic	Reading	Phonics	Lang. Arts	Spelling	Math	Group	Bonus + Social Behaviors
Starting							
Finishing							
Following Directions							
Neatness						X	
Listening							
Working Quietly							
In Seat							
Raising hand							
On Task							
Out of Class							
Earned							

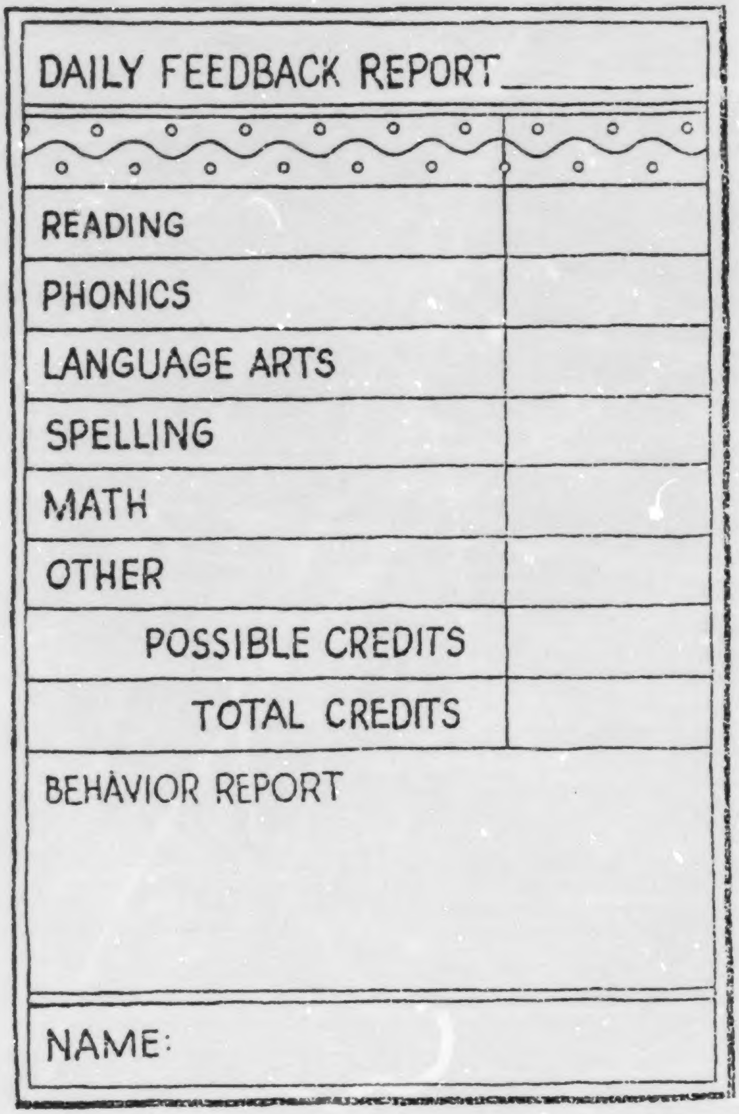
Spent

Saved

Comments

From: Gallagher, P. A. Teaching students with behavior disorders: Techniques for classroom instruction. Denver: Love Pub. Co., 1979.

FIGURE 11



DAILY FEEDBACK REPORT ________

READING	
PHONICS	
LANGUAGE ARTS	
SPELLING	
MATH	
OTHER	
POSSIBLE CREDITS	
TOTAL CREDITS	

BEHAVIOR REPORT

NAME:

From: Gallagher, P. A. Teaching students with behavior disorders: Techniques for classroom instruction. Denver: Love Pub. Co., 1979.

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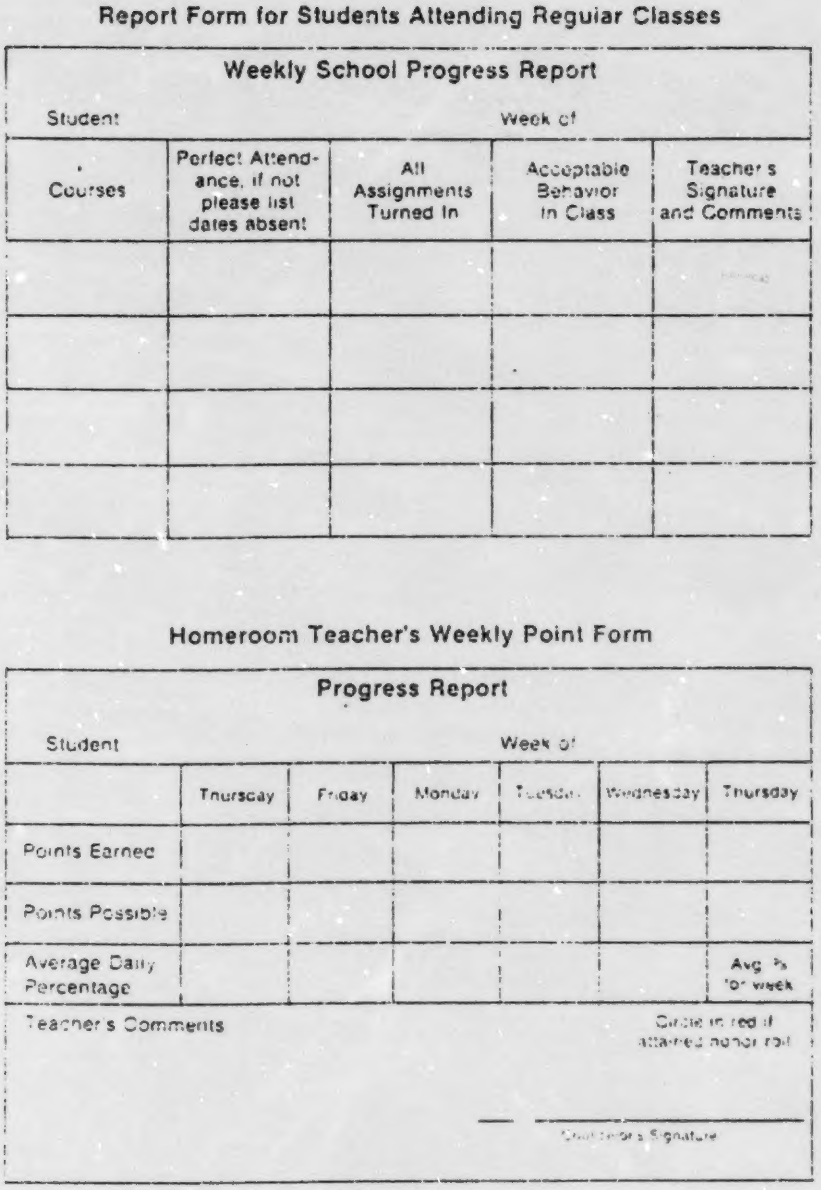
FIGURE 12



Report Form for Students Attending Regular Classes

Weekly School Progress Report

Student Week of

Courses	Perfect Attendance, if not please list dates absent	All Assignments Turned In	Acceptable Behavior in Class	Teacher's Signature and Comments

Homeroom Teacher's Weekly Point Form

Progress Report

Student Week of

	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday
Points Earned						
Points Possible						
Average Daily Percentage						Avg. % for week

Teacher's Comments

Circle in red if attained honor roll

Counselor's Signature

From: Gallagher, P. A. Teaching students with behavior disorders: Techniques for classroom instruction. Denver: Love Pub. Co., 1979.

Contracting is an effective technique which can be used to support students in accepting responsibility. It is a goal-establishing agreement between a minimum of two concerned parties. Contingency contracting involves negotiation of terms between the teacher and student. Positive contingencies are preferred to negative ones; for example, "If you complete your task, then you may enjoy a pleasurable activity," rather than "If you don't finish your task, then you will lose a pleasurable activity," or "If you don't finish your task, then you will be punished." Contingency contracts are the modern day version of Grandma's Law: "If you do all your chores this week, you can go in to town with Pa on Saturday."

Initially, the teacher may need to assume primary responsibility for determining the contract terms. As time moves on, the student should learn responsibility, internalize behavior control, recognize realistic goals and natural rewards. During this process, when the student's behavior changes to a more advanced level, the responsibility for contract terms is shifted.

In order to insure a cooperative effort at the beginning stages of using contracts teachers may refer to the following checklist by Marsh, Gearheart and Gearheart (1978):

A Contract Checklist

1. Explain a contract.
2. Show an example of a contract.
3. Discuss possible tasks.

    Student-suggested tasks: ______________

    Teacher-suggested tasks: ______________

4. Agree on the task.
5. Student and/or teacher suggest reinforcers.
6. Negotiate the ratio of the task to the reinforcer.
7. Identify the time allotted for the task.
8. Identify the criterion or achievement level.
9. Agree on the method of evaluation.
10. Negotiate the delivery of the reinforcer.
11. Set the time or date of renegotiation.
12. Teacher and student both sign contract. (p. 132)

Contracts can include academic or social behaviors, can be written or verbal; however, a written contract is usually desirable. Each party maintains a copy of the contract which can be referred to at any time. This accessibility is useful to those students who separate the consequences of their behavior from their actions. Students who "forget" classroom responsibilities have a reference; thus the contract can replace the frequency of verbal reminders.

Guidelines (Axelrod, 1977) for developing a contract are as follows:

1. The task should be on the student's level. For academic tasks this refers to instructional level and for social skills this refers to the developmental level.
2. Begin with tasks which can be completed in a relatively short period of time. Lengthy and/or detailed tasks can be included.
3. The terms should be clear. Specification of variables is often needed. For example, the student should know that s/he is required to complete 15 math problems rather than "some" problems.
4. Time allotted to the task should be specified.

5. The reward should be frequent; for example, small rewards for slight improvement rather than a big reward for great change. This is more important during the early stages.
6. The task and reward should be of relatively equal weight. For example, a student should not receive thirty minutes free time for completing a math worksheet.
7. It is better to develop individual contracts rather than group contracts because of the diversity in skills and feelings among children.

Teachers should be alert to contracted work which becomes too difficult. Should this occur the task can be broken into smaller steps with emphasis on the completion of each step. If a task consumes an unanticipated inordinate amount of work the contract can be modified at that point and limits redefined.

Contract forms are often designed by teachers to fit the occasion; however, some publishers (Love, 1974) produce forms which can be duplicated. Samples of contracts presented in Figures 13 & 14.

Marsh, Gearheart and Gearheart (1978) suggested that developing contracts can be difficult and time consuming. If a teacher is using contracts for the first time, s/he may want to begin by designing a mini-contract. A mini-contract includes one task, a designated reward and should be completed in one class period. It takes a brief period of time to design. When the teacher and student feel comfortable with the use of the mini-contract, they can advance to a more complicated contract form.

Example of Mini-Contract

I will complete page 29 in my math book with
no more than 3 errors.

I've Got An Offer You Can't Refuse

If ______________________________

____

______________________ by __________

Then ______________________________

____

____

______________ ______________ ______________ ______________

date student witness Teacher

FIGURE 13

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BEST COPY AVAILABLE

FIGURE 14

Responsibility Contract

I ______________ hereby agree to undertake the following

____

____

____

for which I shall receive

____

____

when ______________

____

This contract shall be binding for the week of ______________

Date Signed ______________
Student ______________
Teacher ______________
Contract Completed ______________

x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x

Renegotiation Date ______________

When I hand in my math paper, I will have the last five (5) minutes of class for a free time activity.

Student ______________________

Teacher ______________________

Resources

References and Recommended Readings

Alley, G. & Deshler, D. D. Teaching the learning disabled adolescent: Strategies and methods. Denver: Love Publishing Co., 1979.

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Learning Activities

A review of traditional grading practices suggests the need for greater sensitivity to the uniqueness of all students who vary in their learning styles, rates of development, abilities and experiences. For years teachers have been evaluating students' performances and recording them in record books, on score sheets, on grade cards and in cumulative folders. Evaluations are frequently predicted on the distribution found in the normal curve. The average student becomes a statistic, not an individual, yet school experiences and their subsequent evaluation are designed for the average student. Furthermore, school districts usually adopt grading policies which apply to all students.

Is a policy chiseled in stone? Can it be changed? Can individual teachers select an evaluation system different from that of the district's? Must a school policy on grading apply to all students including the handicapped mainstreamed student? The following tasks (Vasa, 1979) are designed to elicit your views and understanding of the grading. Complete each exercise before proceeding to a new one.

Task #1

What is the purpose of grading? Add your comments to the following.

1. Grades indicate whether a student has passed or failed.
2. Grades identify areas of special ability and inability.
3. Grades provide information to students about their achievement.
4.
5.
6.
7.

Task #2

Mary Smith, a fourth grader, scored 37 on a test of 54 math problems correctly. Her school district, Plainfield, uses an A, B, C, D, F marking system with D designated at the lowest passing grade. A general practice is to regard 70 as the lowest passing mark. Calculate Mary's percentage grade and then give her a letter mark.

____________ Percentage Grade

____________ Letter Grade

Task 3

Raw scores on the math test for Mary's fourth grade fell into the following range.

Highest score	41
Lowest score	26
Average score	33
Mary's score	37 (one of top five)

Give Mary a letter grade (A, B, C, D, F) __________

Task #4

There are seven fourth grades in Plainfield. All seven classes (175 pupils) took the math test and scored as follows:

Highest score	43
Lowest score	10
Average score	22
Mary's score	37

Give Mary a letter grade (A, B, C, D, F) ________

Task #5

Add to the following list your reasons to condemn school grades:
1. Grades are subjective.
2. Grades can have deleterious impact.
3. Grades can preoccupy students and parents.
4.
5.
6.

Task #6

Add to the following list your reasons to defend school grades.
1. Children must learn to be evaluated.
2. Employers need to know abilities of potential employees.
3.
4.
5.

Many teachers are concerned about the discrepancy that exists among their students' abilities within a class and the evaluations associated with these performances. The range of discrepancies expands when performances are compared beyond one classroom as seen in Tasks 3 and 4. This concern is magnified in school districts having a standard of excellence which directs, through the curriculum, their students to college and universities. If the uniqueness of each student's abilities, rates of growth, experiences and interest is of paramount importance then what is a fair grading practice? Complete the following tasks designed to elicit alternative grading practies.

Task #7

Add your ideas to those of the following grading practices.
1. Student-parent-teacher conferences
2. Pass/Fail
3. Recording of student's performance over time for subsequent comparison to that student's earlier performance. Student is compared to self.
4.
5.
6.

Task #8

Review the list of alternative practices and suggest an advantage and disadvantage to each. An example is cited.
1. Conferences
    - Advantage - Interpretation of progress can be clarified at the time of giving.
    - Disadvantage - Finding mutually convenient times for the conference period can be time consuming.
2.
3.
4.
5.
6.

Task #9

Assume you are the fourth grade teacher in Plainfield giving the 54 item math which was given to Mary Smith and her peers. How will you adapt the test experience for the following exceptional students, any of of whom may be in the class?

Student Description

1. A hearing impaired student who has difficulty discriminating conversational speech.
2. A low vision student who requires magnification of print.
3. A mentally gifted student whose visual-motor coordination skills are three years below grade level. Handwriting is a laborious task.
4. A troubled student who is highly anxious during test time.
5. An asthmatic student who has missed a week of classes prior to the test session.
6. A student who struggles to keep up the academic level.

Task #10

How would you grade the exceptional students described in Task 9? How would you grade the typical students?

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ALTERNATIVE PROCEDURES FOR GRADING HANDICAPPED STUDENTS IN THE SECONDARY SCHOOLS

Stanley F. Vasa

> *...the subject of grading is laden with prejudices, dogmas, and unfounded opinions, and for many years it has tended to provoke very unscholarly pronouncements. (Milton & Edgerly, 1977)*

Public Law 94-142 has led the way in advocating the development of individualized instructional systems for the mildly handicapped student. Traditional grading and reporting systems do not adequately reflect this philosophy or intent. The traditional system of comparing the individual with the rest of the class is no longer appropriate. In the case of the identified mildly handicapped student, there is little merit in verifying that the student does not perform as well as the other students on traditional tests or in traditional classrooms. New systems of grading need to incorporate a recognition of individual differences in intellectual ability and learning strengths. Grades must begin to provide more descriptive information by showing individual student gains and identifying specific needs for improvement.

In order to be more adequate, grades should provide a reporting method which is of a descriptive nature about the student's relative achievement. Some of the ideal functions to be addressed by grading and reporting systems are:

- the student's current level of performance;
- the student's readiness for future units of instruction;
- the quality of the student's performance compared to others;
- the effort put forth by the student;
- the student's ability to relate and work with others; and
- the relative improvement of the student's performance compared to past records.

When compared to this standard, traditional systems are often found wanting. This article will explore current grading practices, purposes of grading, issues concerning grades, alternative systems, and suggestions for implementing those alternatives. It is hoped that as educators objectively view traditional grading systems informed changes will occur.

> ***Grades must begin to provide more descriptive information by showing individual student gains and identifying specific needs for improvement.***

Current Practices

Presently, there are many different types of grading practices employed in the secondary schools. In an information survey, 30 different grading practices or variations of grading practices were found to be employed at the junior-senior high school level (Vasa, 1979). The practices ranged from the traditional letter grades to written letters to parents and "gentlemen" agreements between the resource teacher and the classroom teachers. The number of variations in grading practices point out the difficulty in providing specific direction on the best grading and reporting procedure to utilize. Six of the most common grading and reporting practices used in the secondary school are given in Table 1.

Table 1

Six Common Grading Practices in the Secondary Schools

Grading Practice	Description
Letter or Numerical	traditional system of giving the student a mark of A, B, C, D, and F or 1, 2, 3, 4, and 5 to demonstrate relative level of performance on unit or course of study
Pass/Fail Credit/No Credit	criterion-based measurement system which permits the individual teacher to indicate that the student has either met or not met previously determined standards.
Checklists	criterion-based measurement system which has the instructor check student's progress against a predetermined list of needed skills or completion of specific tasks
Contracts	student and teacher agree to assign a mark based on predetermined goals and objectives which the student will reach during the instructional period. The goals may be written in conjunction with the special education teacher/consultant
Letters to Parents	a written report provided to the student or parents to give narrative information about the student's performance
Blanket Grades	all students receive a predetermined grade at the end of the marking period

Purposes of Grading

Some of the controversy surrounding current grading practices is summarized in the statement from the National Association of School Public Relations Association:

- If the purpose is to give the school administrative office a convenient way to sort out those students who should receive promotions, honors, scholarships, and valedictories—grading works well!
- If the purpose is to decide who should go to college and to help college admission officers select candidates for their freshman classes—grading also works well
- If the purpose is to communicate with the parent, giving information about the child's progress and asking for help in overcoming problems—grading could stand improvement
- If the purpose is to motivate the student toward intensive learning—grading often doesn't work well at all. (Grading and Reporting, 1972, p. 9)

Teachers face the problem each reporting period of what would be a fair and equitable way to mark the performance of a student who seems to try but just doesn't perform as well as is expected. The problem for the vocational teacher or content-area teacher is magnified by the concern about standards and providing an accurate picture of the student's performance in the "work world." All conscientious secondary teachers who have been involved in the grading process have spent countless hours trying to determine whether a student should be passed or failed on a specific assignment or course. Their concerns range from:

- upholding the standards of the school;
- maintaining their integrity with their fellow teachers
- being honest with the student;
- justifying the grades with other students;
- motivating the student for better performance in the future;
- communicating accurately to the next teacher; and
- avoiding the reputation of being an easy teacher.

The dilemma of grading is complicated by expectations placed on teachers by others. Administrators, parents, special educators, college admission personnel, and employers all send mixed messages about the purposes of grades. The purposes provided in Table 2 repre-

Table 2

Purposes for Grading and Marking

Administrative Functions

- to indicate whether a student has passed or failed
- to indicate whether a student should be promoted or not
- to indicate whether a student should graduate or not
- to be used by employers in evaluating prospective employees
- to transmit information from one school district to another
- to consolidate records of students' learning and work done so far
- to enable a course to be evaluated
- to give schools public accountability
- to provide the public with a guarantee of competence
- to provide college admission departments with patterns of student performance

Student Functions

- to give students a reward and sense of achievement
- to give students feedback on progress
- to motivate students
- to give students experience of competition
- to test ability to stand up to stress and pressure
- to give students experience of real-life situations
- to prepare students for a stratified society
- to test performance in real life

Teacher Functions

- to evaluate students' progress during the course
- to assess amount of effort put in by the student
- to give feedback on teaching
- to grade in relation to other students
- to grade in relation to criteria of excellence
- to maintain standards
- to maintain staff authority over students

Guidance Functions

- to assist personal development of student
- to predict future performance
- to provide for screening of candidates for occupations and schools
- to stimulate students to greater efforts
- to determine the number of courses in which a student should enroll
- to decide on the advisability for enrolling in other courses
- to permit participation in school activities, play on teams, and win scholarships
- to preserve the existing structure of society

Parent Functions

- to give parents feedback on student progress
- to provide parents with information about appropriateness of course placement
- to provide parents with a means of evaluating the success of the IEP
- to provide parents with information to report to their friends on the student's performance

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The only agencies which regularly ask schools about the class rank of program graduates are colleges and vocational/technical schools.

sent only a sample of the possible reasons for the use of grades in public schools. Some of the reasons may seem to be "tongue in cheek"; however, they need to be considered. The dilemma cannot be resolved without considerable evaluation of: (1) Why am I grading and reporting student progress? (2) Who cares about the relative performance of the student? and (3) How will others use the grade results?

The only agencies which regularly ask schools about the class rank of program graduates are colleges and vocational/technical schools. Generally, other agencies only want to know if the student has completed a program. They are more concerned about the student's ability to relate to others and to work in a cooperative environment. Graduation from a school program does not necessarily mean a certain level of competence is guaranteed by the public schools. If we accept the contention that the agency most concerned about students' comparative performance is the school, we may be able to avoid the over concern associated with the marking of handicapped students enrolled in the regular classroom.

Issues in Grading

Determining Grades. One of the problems commonly cited in the use of traditional grading procedures is how the marks are determined. In many of the academic courses of study in the secondary schools, a majority of the grade or rank in the class is determined on written tests and written work. The mildly handicapped student may often have extreme difficulty in completing written tasks. Written tests and written work may not, therefore, adequately reflect that student's knowledge level. Teachers need to examine very carefully what procedures should be used in determining the appropriate grade or mark. Alternative or supplementary ways of evaluating and reporting student progress could include the use of other measurement devices. For example the teacher might use some or all of the methods listed below:

- class interaction and discussion;
- class projects;
- papers;
- verbal reports;
- student interviews;
- anecdotal records of student performance;
- daily logs of student activities;
- files maintained on the student;
- modified tests—verbal, performance, shortened; and checklists.

By the utilization of some of the above techniques, the teacher may not need to make modifications in the grade reporting system for the mildly handicapped student. Instead, the strategy might be to employ alternative ways of assessing the student's progress toward the course objectives. For example, a student who has a severe reading problem but is capable might be evaluated by oral tests. Other students may need to be evaluated on daily tasks and performance to provide a clearer picture of their progress in the course. In these cases, the classroom teacher would modify the evaluation procedures and not the progress reporting system.

Student Reactions. Many secondary teachers are concerned about the reactions of other students when a modified system is installed for individual students. The key to the success of the installation of the modified system is the attitude portrayed by the classroom teacher. If the teacher models a contemptuous attitude towards the adjustments or makes negative comments about the system, students will soon pick up this discontent on the part of the teacher and probably react accordingly. From the experience of the author, the teacher is advised to never discuss one student's performance with another student. The precedent for this opinon is contained in the code of ethics for teachers (National Education Association, 1963). It states that the professional should not discuss one student with another individual unless it serves the purpose of benefiting the student in question. The best response the teacher can make when a student questions the procedures or grading practices employed with another student is to state, "I do not discuss your grades or performance with other students, and I will not discuss the performance of other students with you. If you have questions or concerns about the methods being used to evaluate your performance, I would be pleased to discuss them with you." Students commonly seek to improve their status in classes by making unfair comparisons with other students.

The "Watered Down" Curriculum. Vocational teachers have often expressed a concern that they cannot vary the competencies for their respective courses for the mildly handicapped student. They argue that adjusting grading criteria provides an inaccurate representation of student skills. Further, that industry and business maintain standards which they expect of program graduates, therefore, allowing a student differential criteria for competencies would bring discredit to the institution's training program. This is a legitimate concern if the school's vocational program chooses to provide only a letter grade or a dichotomous grade and does not provide the potential employer with a list of skills or competencies completed by the student. The question should not be one of standards but rather reporting what skills the student has mastered. This problem can be resolved by the establishment of a competency checklist in a developmental sequence. If requested by the employer and approved by the student or his/her parents, a form containing information on the student's performance could be forwarded at the time of employment.

The curriculum of the vocational programs or the content areas do not necessarily have to be "watered down" because mildly handicapped students are enrolled. Instead, the instructional and

Competition for grades benefits the small minority of students who end up as "winners." The vast majority of students are confronted by frustration and humiliation.

evaluation procedures may need to be redesigned to more accurately reflect the needs and knowledge of participating students.

Comparison Grading. One concern which has caused great controversy is the comparison of the mildly handicapped student's performance with the performance of other students in the class. John Holt (1970) states very eloquently that grades should be abolished because of their detrimental effect on learning. They foster unhealthy competitive attitudes in students, and they hurt self-esteem and create misleading expectancies about students' future school performance. These statements were not directed at the mildly handicapped but pertain to grading in general. Competition for grades benefits the small minority of students who end up as "winners." The vast majority of the students are confronted by frustration and humiliation. Millman (1970) suggests that criterion-reference grading and the use of the mastery report card would alleviate some of the inequities of current grading practices. All in all, there is a great concern about how student performance in the classroom should be evaluated and reported.

ALTERNATIVE GRADING PRACTICES

In this section, four alternative or adjusted grading practices are presented: (1) contracts; (2) pass/fail systems; (3) letter or numerical grades; and (4) checklists. Each of these grading systems will be discussed in terms of their advantages, disadvantages, and suggestions for the implementation of the system.

Contracts

Contracting between the student and the teacher has been a common practice in many elective courses in the secondary school. The contract is merely an agreement between the classroom teacher and the student about the level of performance to be maintained in order to obtain a specific grade. The contract with mildly handicapped secondary students is frequently based upon the IEP written for the student. A good contract would include the following:

- types of work to be completed by the student;
- the quantity of work to be completed by the student;
- an agreement as to how the grade for the student will be determined;
- a statement of how the quality of the work will be determined;
- the signature of the involved parties, e.g., teacher, student, special education resource consultant, parent; and
- timelines for the completion of the work, when appropriate.

Advantages. Advantages to the utilization of the student contract form are summarized as:

- clearly identifies for the student what is expected;
- subjectivity on the part of the teacher is reduced because quality and quantity requirements are stated in advance;
- diversity of tasks and assignments is encouraged for students;
- competitive grades are discouraged because the criteria for grades is determined for the individual student;
- recognizes the ability of the student to participate in goal setting; and
- promotes better mental health in the classroom.

Disadvantages. Disadvantages commonly cited for the utilization of student contracts are:

- creates additional record keeping for the teacher;
- quantity of work rather than quality of work can be overemphasized;
- difficulty in finding creative ways to measure the student's performance; and
- differences predicated on lack of student and teacher agreement on assignments.

Implementation. The two most important criteria for a contract are: (1) should be written in simple and easy-to-understand language; and (2) provides for a commitment among participants. The teacher employing the contract as an alternative grading practice must be organized, goal directed, accountable, and capable of task analyzing objectives. In addition, the contracting process requires skills in communicating and interpreting students' interests. The process of contracting involves a modified problem-solving approach on the part of the teacher and student.

In using the problem-solving model, the teacher needs to be clearly aware of the options which are acceptable for the student to demonstrate knowledge or competence in the classroom. In reviewing the student's strengths and weaknesses, the resulting contract could provide alternative strategies for the student mastering information in the course and alternative methods of evaluating the student's progress towards the stated objectives. The contract is one of the most widely used methods of accommodating the mildly handicapped student in the regular classroom. In some cases, the contract can be a "gentlemen's agreement" between the special education resource teacher and the regular classroom teacher on modifications needed for the course.

The major point to remember is that the contract should be written and agreed upon in advance of the instruction. A sample contract form utilizing a traditional letter grading system is presented in Figure 1.

Pass/Fail System

The pass/fail system of grading is one of the simplest to operate. In this model only the minimum competencies for the course or for individuals need to be determined. The successful completion of the minimum level or exceeding the minimum level permits the student to receive a grade of pass or "P." Students not reaching the minimum criteria fail or "F." The pass/fail grading system can be reviewed as part of the blanket grading system where all students receive a "P" or pass. The pass/fail system can also be viewed as a contract system in which the student meets the established criteria and receives a passing grade.

Advantages. Advantages of the pass/fail system are:

- less pressure placed on students for competition;
- less anxiety on the part of the students;
- cheating and "buttering up" the teacher are not needed;
- student knows what is expected and works toward a goal;
- student's achievement level can be increased or levels of aspiration can be increased;
- careful examination of the student's relative abilities and disabilities; and
- relieves the teacher of the responsibility of comparative evaluation of student's work.

Disadvantages. The following disadvantages for the utilization of the pass/fail system are noted by teachers:

- teacher may not provide corrective feedback in weak areas;
- passing grade is meaningless in distinguishing between students with differing abilities;
- some students do less work when freed of pressures for traditional grades;
- presents same pressures on students close to failing as the traditional grades; and
- minimum standards may be arbitrary and difficult to define.

Implementation. The pass/fail system does not require many modifications in present procedures on the part of the classroom teacher. The key is to establish the competencies for the course and to determine what each student should complete for a passing grade. The major concern is whether the student reaches the designated competencies or skill level rather than how has the student performed in comparison with other students. In adopting this system, the instructor still needs to utilize a number of different types of evaluation techniques to measure the student's progress toward the competencies.

In utilizing the pass/fail procedure, teachers more commonly rely on observational data about students rather than formal tests. The observational data would include: student performance on daily tasks, completion of assigned tasks, interviews with the student; and anecdotal records of student performance. The contract form in Figure 1 could be easily adapted to allow for its use with the pass/fail system of grading.

Letter or Numerical Grades

Letter or numerical grades in one form or another are the most widely employed reporting systems in use. These traditional grades have been utilized because they have relayed comparative information about student's performance to parents, other interested parties, and students. Often, the information provided by this system may be inaccurate and

Figure 1

Student Grade Contract

I, ____(student's name)____, agree to complete the following objectives and activities by________________(date)________________.

1.
2.
3.
4.

____________________ (student's signature) __________ (date)

I, ____(teacher's name)____, agree to award a grade of ________ upon completion of all objectives and activities listed above, if completed by ________(date).

____________________ (teacher's signature) __________ (date)

Monitoring System

	Date Started	Date Completed	Teacher Initial
Objective 1			
Activity 1.1			
Activity 1.2			
Objective 2			
Activity 2.1			
Activity 2.2			

Etc.

distorted. By some school's policies, teachers are locked into a grading system which requires them to utilize a range of grades from A to F or 1 through 5. When the teacher does not have the option of developing grade reporting procedures, he will need to adapt to the situation by modifying the measurement techniques used in determining the grades.

Advantages. Below are listed some of the advantages of the letter or numerical grade system:

- easy and convenient for use by the classroom teacher;
- readily accepted by most parents of high achieving students;
- fairly good predictor of future grades; and
- can be numerically converted to single score (GPA).

Disadvantages. Disadvantages of the letter or numerical grade system:

- meaning may vary between schools and individual classes;
- unusual combination of motivation, performance, and achievement;
- provides for unfair competition for students;
- produces anxiety for students; and
- probably does not relate to any future performance in the work world.
- teachers have a tendency not to use the whole scale.

Implementation. From a philosophical viewpoint, traditional numerical and letter grades are more harmful than helpful to the mildly handicapped student. In many secondary schools, however, teachers do not have the option to employ other methods of reporting student progress. In these schools, teachers need to decide what ways of modifying the measuring system exist for these students. Teachers may need to adjust the testing procedures and allow for greater use of other techniques of measurement, such as daily assignments, progress checklists, student interviews, and class projects.

The essential ingredient in accommodating the mildly handicapped secondary student will be to establish criteria for the completion of work at relative standards (A, B, C, D, F), rather than basing the grades on a comparison. Again, the student contract form would be helpful in this arena.

Checklists

Competency checklists have been widely used in skill oriented courses and in developmentally sequenced academic courses, such as mathematics. The checklist provides for a guide to the individual student's progress towards goals stated in the instructional plan or individual educational plan. For example, in the vocational auto mechanics course, the teacher could break the learning units into small modules to permit easy assessment of skill acquisition.

Advantages. The checklist offers the following advantages:

- more value than a grade alone and helpful to the student;
- more meaningful to parents and future employers;
- gives more detailed information about the student's performance;
- can pinpoint weaknesses in the school instructional program; and
- skills may be prioritized.

Disadvantages. Disadvantages cited for the checklists are given below:

- may be time consuming for the teacher;
- increases the amount of paper work for the teacher;
- tasks and objectives may not be understood by the parents;
- changes in instructional objectives can necessitate changing the reporting form; and
- written evaluation allows the teacher to be more subjective and checklists tend to focus on weaknesses.

Implications. The checklist is an excellent way for the teacher to indicate the progress a student has made during the course of instruction. The competencies for the checklist are derived from the course objectives. The checklist is written in competency form with an accompanying means of determining student mastery of each step in the attainment of the necessary skills. There needs to be a balance between detail and ease in use of the checklists. Generally, the more difficulty the student is having the more detailed the checklist needs to be.

An additional advantage of checklists is that they may be designed to allow varying mastery or application of each objective. The sample checklist shown in Figure 2 illustrates the differentiation be-

Figure 2

Sample Checklist

Objective: The student will be able to adjust carburetor linkage to manufacturer's specifications

(Sample) Competency	1 - Student has identified carburetor linkage parts.
Basic Competencies	2 - Student is able to explain the function of the carburetor linkage.
	3 - Student has adjusted sample linkage correctly.
. . .	. . . .
	4 - Student can disassemble and assemble carburetor linkage parts.
Advanced Competencies	5 - Student can identify misaligned or broken linkage parts.
	6 - Student can adjust linkage on four different makes of automobiles

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From a philosophical viewpoint, traditional numerical and letter grades are more harmful than helpful to the mildly handicapped students.

tween basic competencies and advanced competencies. In this case the student was awarded a grade of "B" for demonstration of all basic competencies and a grade of "A" for demonstration of all basic and advanced competencies. Depending on school policy, progress may be translated into a letter or number grade or reported directly using the checklist.

Alternative Evaluation Practices

In grading students who are mildly handicapped, it is desirable to have a number of alternative ways of assessing the students' progress toward the intended objectives of the course. Most often student progress is measured by some type of testing procedure. Some of the points to remember in the process of developing testing procedures in the classroom are:

- a variety of options to match unique strengths and skills of students should be available;
- at least the same amount of feedback from tests and grades should be provided the mildly handicapped students as that for regular class students;
- a variety of measuring techniques for student skill attainment, e.g., class projects, class interaction, etc., should be available; and
- variation in the testing process should be provided, e.g., verbal, shortened, etc.

In monitoring the progress of the mildly handicapped student, the teacher may need to make more frequent and specific evaluations of the student's progress, perhaps on either a daily or weekly basis. The determination of grades on a daily or weekly basis can provide feedback for the instructor concerning the appropriateness of the instruction. This process, also, helps to both identify the student needs and motivate the student. Table 3 provides a suggested list of adaptive procedures for modifying the evaluation and testing procedures for the mildly handicapped secondary student.

Conclusion

This article has attempted to review the rationale and some options for modifica-

Table 3

Alternative Methods of Assessing Student Progress

Types of Modification	Procedures
Verbal Tests	Administer test verbally by the teacher, paraprofessional, peer, or other to permit student to complete similar requirements
Shortened Test	Reduce the number of test items on a scale to permit additional time or remove items which require more abstract reasoning or have high difficulty level
Levels of Questions	Use different levels of questions for different students—similar to shortened test, but the items are written at a more concrete level.
Frequency of Tests	Utilize short written or verbal measures given on a frequent basis—daily or weekly—to assess student progress. This allows for more feedback on student progress.
Length of Time for Completion	Increase the amount of time a student has to complete the measure to allow for slower writing, reading, and comprehension. Is important with many students.
Types of Responses	Provide for short answer or simple marking of correct response by the student. Measures should be matched to student's response strengths.
Verbal Review of Literature	Substitute verbal review of literature for testing. Have student review the course or unit content with teacher, paraprofessional, peer, or resource teacher. This permits the student to present what they have learned and doesn't require that they be limited to test items.
Peer Tutoring	Include peer tutoring for teaching and testing purposes. Permits student to learn from their peers, who often present materials more clearly than the teacher. Does need to be monitored and the peer tutor should receive some basic training.
Development of Instructional Packet	Have student develop a packet of material to show knowledge and understanding of content of the unit. This shows what they believe is important.
Checklists	Use developmental checklists to permit the observation of student learning in a sequential and organized way that shows student progress. Checklists are good in academic-content courses and vocational courses. They permit the teacher to limit the number of formal tests.
Class Interaction	Assess student participation in discussion which indicates student mastery of content.
Course Projects	Measure progress towards final course product. In vocational classes, the standards may need to be altered when making comparisons with other students.

tion of the traditional grading procedures in the schools. Several models for grading and reporting progress have been discussed. The purposes for grading practices should be clearly understood before a system is implemented. Teachers must be: (1) organized, (2) goal directed, (3) systematic, and (4) able to analyze objectives to develop appropriate means of measuring and recording student progress. In conclusion, school administrators, boards of education and teachers need to carefully review current grading and reporting practices. The author believes that through this careful review changes would occur in grading practices.

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